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WEEKLY REPORTS
Of the Offices of
WESTERN IRRIGATION AGRICULTURE
And
DEMONSTRATIONS ON RECLAMATION PROJECTS



Vol. XXIII

July 7, 1923.

127

Western Irrigation Agriculture

Newlands

For the three-week period ending July 7, Mr. Knight reports as follows:

"The meteorological data recorded at this station for the period follows: temperature mean maximum 83, maximum 94 on July 2; mean minimum 45, minimum 35 on June 22 and 24; rainfall .16 inches on June 18.

The general work of cultivation and ditch cleaning has been continued during this period. For several days the majority of the men were busy with the first haying.

After the first hay crop was stacked the alfalfa plats were dragged with a grasshopper catcher. This was followed by a poison bran mash being broadcasted at the rate of five pounds to the acre.

One irrigation was given to plats E1, 2, 3, 7, 8; H12; and all of C except plat 1.

Following is a summary of the hog feeding experiments for 8 weeks ending June 28, 1923.

	: Lot I	: Lot II	: Lot III	: Lot IV
	: Barley	: Barley &	: Barley	: Barley &
	: &	: Milk &	: &	: Milk &
	: Hay	: Hay	: Pasture	: Pasture
Number of pigs	: 5	: 5	: 5	: 5
Initial weight	: Lbs 205	: 203	: 204	: 199
Final weight	: " 316	: 326	: 369	: 326
Gain	: " 111	: 123	: 165	: 127
Daily gain	: % .78	: .85	: 1.06	: .89
Barley fed	: Lbs. 270	: 136	: 297	: 141
Milk fed	: Gals.	: 85	:	: 88
Grain per Cwt. gain	: 2.43	: 1.11	: 1.80	: 1.11
Value barley @ \$2.00 per Cwt.	: \$5.40	: \$2.72	: \$5.94	: \$2.82
Value milk @ \$0.01 Gal.	: .	: .85	:	: .88
Total cost of feed	: \$5.40	: \$3.57	: \$5.94	: \$3.70
Cost per pound gain	: \$.049	: .029	: .036	: .029
	:	:	:	:

E. W. Knight.

San Antonio

Meteorological data recorded for the week ending July 7, 1923 were as follows:- maximum temperature 96, minimum 69, greatest daily range 23, and precipitation 0.00. Six days were clear and one was partly cloudy.

Rain which fell the night of June 30, prevented field work on Monday. Tuesday and Thursday were spent baling hay and storing same in the barn loft. Other work done during the week included the cultivation of all cotton plantings, hauling sorghum hay from the rotation plats, plowing in the pasture east of the corrals in preparation for fall oats, repair of

THE ANNALS OF THE AMERICAN PHYSIOLOGICAL SOCIETY

PUBLISHED BY THE SOCIETY

1900

THE ANNALS OF THE AMERICAN PHYSIOLOGICAL SOCIETY, published by the Society, is a journal of the progress of physiological science, and of the application of physiology to medicine. It is devoted to the publication of original researches, and of reviews of the progress of the science. The Society was organized in 1887, and has since that time published this journal. It is a society of the American people, and its members are of all nations and of all religions. Its purpose is to advance the science of physiology, and to apply the results of that science to the benefit of the human race. The journal is published quarterly, and is one of the most important and most interesting of the scientific journals of the world.

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San Antonio (continued)

machinery and buildings, and a continuation of Johnson grass chopping.

Cotton bolls weevils are increasing rapidly due to the emergence of the first generation in the fields.

Geo. T. Ratliffe.

Scottsbluff

The average maximum temperature for the week ending July 7 was 89, with a maximum of 94 on the 7th; the average minimum was 57, with a minimum of 54 on the 2nd; the precipitation was 0.37 inches, or a total of 8.55 inches for the season (since April 1).

The force has been employed at miscellaneous field work during the week. The alfalfa plats in Field K and the grass and other pastures have been irrigated; some improvements about the buildings and grounds have been made, and other odd jobs attended to.

The grasshoppers are becoming serious and control measures are being put into effect, mostly by the use of poison.

James A. Holden.

Yuma

The maximum temperature for the week ending July 7th was 110, minimum 64, greatest daily range 45, ppt. 0.

The condition of the cotton and the alfalfa seed crops on the project is very satisfactory. A drive for membership during the last month has been made to perfect the new alfalfa seed organization known as the Yuma County Farm Bureau Marketing Association. This association will handle grain, seed, hay and straw and will include those growers who have signed up on the California side of the project. A minimum of 33-1/3% of the entire alfalfa and grain acreage on the project for the year 1923 was necessary to make the contracts of the association binding. This amount has already been signed up.

The U. S. Reclamation Service, the Water Users Association, Bankers Association, and the real estate men of Yuma are perfecting an arrangement whereby an extensive selling campaign is to be initiated this summer and fall for selling the excess lands on the project. The extension of time granted to excess land owners terminates in December of this year.

Station work performed during the week included the planting of the grain sorghum variety test, E-3 to 8; planting increase block for hegari, E-44-45; plowing plats D-19-20-21 for corn; cultivating cotton on the irrigated rotations; general irrigating and hoeing.

E. G. Noble.

CONTENTS

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION
PUBLISHED WEEKLY
CHICAGO, ILL., U.S.A.

Subscription price, \$5.00 per annum in advance.

Editorial

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Demonstrations on Reclamation ProjectsBelle Fourche

During the week ending July 7 parts of two days were spent with J. C. Holmes, marketing specialists from Brookings, on the local pooling of wool. Two cars of wool are ready to leave Newell and three cars have been shipped from Belle Fourche through the pooling system.

Numerous calls for assistance were received and answered on the control of grasshoppers by use of poison bran mash. Two farmers report excellent results from poisoning.

Two tours of a day each are planned later in the month for the farm management clubs when H. D. McCullough of the State extension service will visit the project.

Frank E. Miller.

Minidoka

Dairy interest on the project was much stimulated during the course of the week ending July 7 by the visit of the Wisconsin Dairy Special Train which is touring Idaho. Farmers were much interested in the talks given by breeders and breed association officials.

The cheese factories at Burley and Declo opened with a good supply of milk and promises to be an appreciable asset to the community.

Butter fat prices are 31 cents at the cream stations, 48 cents at the cheese factory.

Grasshoppers are doing a great deal of damage to new seedlings of alfalfa and grain crops. Farmers have about finished putting up the first cutting of alfalfa hay.

The north side of Minidoka project is assured an area tuberculin test which will be made very shortly. The south side of the project will be included if the commissioners of Cassia County make their appropriation in time.

J. T. Montgomery.

Newlands

Cooperative marketing has required some attention during the week ending June 30. Assistance was given in assembling and marketing one car load of hogs on Monday. Eight farmers participated in this shipment. The entire load of hogs was graded as prime and brought 8 cents per pound in Reno. On Thursday a cooperative shipment of cattle was sent out. Five farmers participated in this shipment. Good steers brought $6\frac{3}{4}$ cents per pound and good cows 5 cents per pound in Reno. One day was spent in Reno in the interest of cooperative marketing.

It has been necessary to devote considerable time to the subject of turkey diseases. The presence of black head on the project seems to be very general, and constant effort is necessary to keep down losses. In the case of turkeys that have just developed symptoms of the disease the syrup of ipecac treatment seems to be giving best results. For young turkeys weighing one to three pounds three or four drops of syrup of ipecac diluted with twice as much water given to each turkey with a medicine dropper, has given relief in a large majority of cases. Strict sanitary

Newlands (continued)

precautions to prevent the young turkeys from picking up new infection is of the greatest importance. In a number of cases where serious loss seemed certain, relief has been secured through these measures.

Herd testing work has been one of the principal items of importance during the week ending July 7. Because of the fact that so many members of the testing association are putting in milking machines it has been necessary to provide a partition bucket for those using the double unit. A milking machine bucket having a partition was secured, and was found to be adapted to most of the other milking machine heads. Fortunately a number of the dairymen use the single unit Delavel milking machine on their herds.

The harvesting of the first crop of alfalfa hay is about half completed. Those farmers, who began harvesting the middle of June were severely handicapped on account of cloudy and rainy weather. Some of the ranchers, whose alfalfa was badly damaged by plant lice, delayed their harvest about two weeks, but will have a good crop. The first crop of alfalfa hay over the project is considered to be about 30% short. This has been due to the cold spring, plant lice and grasshoppers. Considerable damage to the second crop is anticipated from grasshoppers.

L. E. Cline.

North Platte

Shannon Mountjoy, a representative of the Daily Drivers Journal-Stockman of Omaha, was in the Valley during the week ending July 7 for the purpose of collecting material for favorable publicity for the valley. Mr. Mountjoy made his headquarters at the Experiment Farm and considerable time was spent driving with him over the project and putting him in touch with men whom he should see.

Members of the Henry Pig Club went visiting Monday afternoon calling on each member of the club and a few breeders and club members on Dutch Flats. At each stop pigs were exhibited and rations and methods of handling discussed.

The Sunflower Calf Club met at the Experiment Farm Thursday afternoon and the Pig Club Friday afternoon for the purpose of practice judging. A couple of hours were spent with each club showing them the livestock at the Experiment Farm. Classes of calves and pigs were placed.

Sick hogs were reported at Pete Schnell's, south of Minatare. Mr. Schnell had cholera about three months ago and his hogs were vaccinated. Three weeks ago he bought 18 spring pigs and put them with the rest of his hogs. It is these pigs that are now sick with cholera. They were given the serum treatment.

D. H. Propps.

Sun River

The frequent showers of the week ending July 7 has caused most of the farmers to cancel their water orders, as a result there was practically no

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Sun River (continued)

irrigation except on a few fields of alfalfa. The rains of the last three weeks will probably be sufficient to mature the dry land wheat.

Two days were spent in level work and in planning field irrigation systems.

A visit was made on the second bench east of Fairfield to ascertain damage done by the grasshoppers. Some grain had been completely stripped of the leaves. An effort was made to encourage the farmers to continue poisoning. A 220 acre wheat field of Mr. Bateman was visited. The grasshoppers on this land were the thickest that had yet been encountered. The grain was in the flowering stage, the hoppers had started on one side and as they moved in were cleaning the field of everything but the stock and the heads. Plans were made to place poison over the entire field. Two farms were visited that were using grasshopper catchers. When a few minor improvements are made in the catcher it is possible that they will be effective.

The past week has been an excellent one for the crops, there has been almost daily showers and the weather has been warm.

Blaine Kelsey.

Shoshone

Work relating to Boys' and Girls' Clubs and dairying took up most of the time during the week ending July 7. A survey of the mixed grass pastures on the Garland Division was made, six farms being visited. These pastures in size range from 1 to 4 acres. Three owners express themselves as satisfied with results to date, but the remainder are doubtful of their value and economy. One farmer is using a three-acre pasture for sheep exclusively because his cattle bloat every time they are turned in. He considers the alsike clover which was seeded with the mixture the cause of the trouble.

The second cutting of alfalfa is nearly all in the stack, the yield being good except where the hail storm removed the leaves. The price of butterfat changed from 39 cents to 37 cents during the week.

G. A. Wright.

Uncompahgre

The week ending June 30 was given to work in connection with the fair, tuberculin testing, a program for dairy day, July 10, 11 and 12 and testing milk samples of herds on regular test.

At a meeting of the city council on Monday night, Dr. W. E. Howe of the Bureau of Animal Industry was present and discussed the tuberculin testing from the viewpoints of the Department and the state. He complimented the work done around Montrose and advised an attempt to secure enough signatures on petitions to form a "tuberculin eradication area" here. Copies of such a petition are being circulated and others are kept in this office and in the office of the city manager. Sentiment in favor of the move is practically unanimous.

Plans for Dairy Day on July 10 in Montrose County and on July 11 and 12 in Delta county are progressing. The State Dairy Commissioners Agriculturist for the D. & R. G. W. Railroad; Chief, Western Office, Dairy Division Secretary of State Dairy Council, and fieldmen of several breed associations are expected to be here to furnish the program.

Uncompahgre (continued)

During the week ending July 7 one small flock of poultry was culled and the culls marketed at once. This flock had been laying heavily but dropped off suddenly in production. It was found that all the two year old hens had become fat and quit laying, as well as some of the yearlings. Forty-seven percent of the flock was culled without causing any decrease in the production of eggs. The culls were sold at $13\frac{1}{2}$ cents a pound, bringing an average of 77 cents each.

Mr. Summers, Farm Management Specialist from the State Extension office visited the office this week. It had been planned to make surveys of a number of farm flocks of sheep when he was here but his visit came when farmers were putting up their hay and it was nearly impossible to talk to them long enough to accomplish anything, so that no satisfactory surveys could be made.

Most of the week was given to arrangements for the Dairy Day tour and program on July 10 in Montrose County and July 11 and 12 in Delta County. A circular was sent to a large list of dairymen, special advertising was secured in the local papers and articles were published on the event. A meeting is planned for the evening of July 9 in Montrose to discuss the financing of dairy cow importations at which several bankers and business men have been invited to be present.

H. A. Ireland.

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WEEKLY REPORTS

Of the Offices of

WESTERN IRRIGATION AGRICULTURE
And

DEMONSTRATIONS ON RECLAMATION PROJECTS

Vol. XXIII

July 14, 1923.

No. 28

Western Irrigation Agriculture

Huntley

The maximum temperature for the week ending July 14 was 96, minimum 52 and precipitation .05 inch.

The weather continued hot and dry during the week and irrigation requirements were high. Crops on the project are in good condition generally, excepting in a few sections where grasshopper damage is becoming serious.

At the station all crops, excepting corn, were irrigated. Other field work during the week consisted of cultivating row crops and weeding.

Arrangements are being made for the annual project picnic which will be held at the Experiment Farm on August 18.

Dan Hansen.

Scottsbluff

The average maximum temperature for the week ending July 14 was 85, with a maximum of 98 on the 8th, (this is also the maximum for the season); the average minimum was 61, with a minimum of 59 on the 10th. and 14th. The precipitation amounted to 2.11 inches, 1.33 inches falling on the afternoon of the 14th. This was the heaviest rainfall of the season and in some sections did considerable damage. At Camp 12 of the Reclamation Service at Minatare Dam over 4 inches of rain was recorded. This fell in less than an hour and was accompanied by hail and a 40-mile wind. The hail covered a territory about 3 miles wide and 6 miles long and considerable damage was done both by the hail and washing of soils on the steep lands. Breaks occurred in both the High Line and Low Line canals of the Reclamation Service.

The total precipitation for the season has been 10.66 inches as compared with 9.12 inches for the same period last year.

The second hoeing of beets was completed during the week. Corn in Field C and the irrigated rotations was cultivated. The grass pastures have been irrigated again and water was turned on the sweet clover pasture in Field E.

James A. Holden.

Yuma

The maximum temperature for the week ending July 14 was 103 degrees, minimum 58, greatest daily range 43, precipitation 0.

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1871-1872

Yuma (continued)

The four cloudy days, with reported rains in the upper Gila and Salt River Valleys, caused a period of high humidity. This kind of weather caused the alfalfa seed growers much concern. Many growers began their seed harvest during the week. Since no precipitation is reported weather conditions have been ideal for the alfalfa seed harvest.

Station work performed during the week included the harvesting of sweet clover seed, Berseem, Hairy Peruvian and India alfalfa seed increase blocks; plowing stubble, plats C-21 to 23, inclusive; installing irrigation gates in the rotations; cutting date leaves for nursery shelter; general irrigating, cultivating, and hoeing.

The fall pigs, on alfalfa pasture and 2% ground barley, Rotation 63, were removed during the week. During the pasturing period of 77 days, the total gain was 293 pounds, average daily gain per hog, .63 pound, pounds grain per pound gain, 4.

E. G. Noble.

Demonstrations on Reclamation ProjectsBelle Fourche

Much of the week ending July 14 was spent in the marketing of wool. One car left Newell during the week and enough wool is lined up for another car the coming week. With wool selling for 40 and 41 cents, many growers hesitate about selling for cash and are shipping their clips with the hopes of getting a better net return by fall through orderly marketing.

Nearly two days of the week were given to hopper control through the use of poison bait. From 60% to 90% kills are secured depending upon the amount of bait used and the thoroughness of the work performed.

Assistance was given to two sheep men in the eradication of worms and maggots. For the elimination of worms in sheep, fine results have been secured by mixing tobacco dust with salt and keeping the mixture before the sheep all the time.

Frank E. Miller.

Newlands

During the week ending July 14 assistance was rendered in the selection of a foundation herd of Jersey cattle and assistance was also given in making plans for an extensive poultry plant on one of the large ranches in the Stillwater District. If this proposition finally goes through one of the hot water wells of this section will be utilized for incubation and brooding of chicks on a large scale. It is proposed also to maintain a very large laying flock of chickens of high production to supply eggs for the incubators. The Fallon district alone this year imported 40,000 baby chicks from the Petaluma district, California. A hatchery established in this project would be assured an excellent market for its product.

Tuberculosis eradication work in this project is making very good progress. Two more week's work should complete the project. The percentage of reactors has been very small since the first part of the campaign. It is expected that by the time all the cattle in the project are tested the percentage of reactors will be considerably less than 2%.

North Platte

Half of the week ending July 14 was spent in Goshen county, Wyoming with the recently appointed County Agent, P. H. Duperduis, and the two Smith-Hughes teachers, Harry Sheldon at Lingle and C. A. Willi at Torrington. As part of their school project work, Mr. Willi and Mr. Sheldon are having some of their High School boys test and keep records of the dairy herds in the community. Cow testing association supplies are furnished by the U. S. Dairy Division. An organization of the testers was formed this week and meetings of the association will be held once a month. The secretary will send to the dairy division reports of the cows tested.

Paul H. Duperduis, at one time state leader of boys' and girls' clubs, has been recently appointed county agent for Goshen county. Some time was spent with him calling on farmers in the county. Two farmers who had asked for assistance in locating Holstein bulls were visited and the bulls were selected from the Barton herd at Gering.

The first caponizing of the season was done Wednesday for Chester Brown north of Morrill. Last year Mr. Brown sold 200 capons. He will have as many or more this year.

H. P. Davis, head of the Dairy Department at Lincoln, visited the Experiment Farm the last of the week. In company with Prof. Davis a trip was made over the project calling on dairy farmers. Other visitors during the week were Dean Burnett and Prof. Burr of the College of Agriculture and Drs. E. D. and C. R. Ball of Washington, D. C.

D. H. Propps.

Shoshone

Hot weather continued throughout the week ending July 14 and all crops grew rapidly. The yield of the first cutting of alfalfa was noticeably better than the same cutting last year.

The grasshopper campaign under the direction of the County Agent of Park and Big Horn counties is proceeding with good cooperation in some communities, but too many farmers on the project are indifferent.

The new management of the Powell Creamery is being received with increasing favor, and is making butter good enough to be in demand by the Burlington Hotel at Cody, which feeds the Yellowstone Park tourists.

A trip was made to Deaver, Frannie and Mantua to assist several dairy-men with their problems. Club work, milk testing, and livestock diseases received attention. On Saturday a committee meeting at Cody was attended to assist in planning for a Park County farmers' picnic which will be held July 25 near Cody.

Butterfat is selling for 37 cents per pound.

G. A. Wright.

Sun River

The frequent showers in the early part of the week ending July 14 have kept crops in fine growing condition. There has been a little irrigation on the alfalfa.

On the Greenfield and the Fort Shaw division a few trial patches of sugar beets have been planted. Beet raising is new to the farmers and they therefore know little of the methods of working the beets. On the Greenfield division the beets were planted late and are now ready for thinning. Two and one half days were spent in demonstrating to the farmers the method of thinning beets. An effort was made to bring experienced beet thinners from Great Falls but without success. The beets are late but they are growing fine and present indications point to a fair yield. The sugar beets on the Fort Shaw division were visited Thursday. There are a few fields here of one, two, and three acres in extent. The beets that have been properly taken care of show prospects of a good yield.

The principal crop in this section is wheat. If these experiments indicate that the soil and the climate are adapted to the growing of sugar beets, a change from wheat to a more money producing crop such as beets, would materially strengthen the farming on the project.

Grasshopper damage has been reported on the second and third bench of the Greenfield division. The hoppers are receiving wings and are migrating. Grain surrounded by waste land is generally damaged first. Poisoning is not proving effective. Grasshopper catchers have been successfully used on the short grain.

Specimen of a new grass and of a new weed were sent to the Agricultural College at Bozeman for identification. Thirty bulletins on Irrigation, Grain Raising, Livestock, and Grasshopper control were distributed during the week.

Blaine Kelsey.

Uncompahgre

Most of the week ending July 14 has been given to a dairy extension program planned in connection with the State Agricultural College and the Denver and Rio Grande Railroad. Professor Morton head of the Animal Husbandry Department and State Dairy Commissioner; W. H. Olin, Agriculturist for the D. & R. G. W. Railroad; C. M. Long, Manager of Field Work for the Holstein Friesian Association; D. W. Thomas, Secretary State Dairy Council and S. Basherov of the Salt Lake office, U. S. Dairy Division, arrived on Monday at noon and remained in this territory until Thursday evening. A total of six meetings were held at which these men discussed various phases of the dairy industry, the purpose being to create more interest in dairying and to secure improvements in breeding, feeding, etc. The first meeting was held in Montrose with a number of business men at which time the matter of financing importations of cows was discussed. The second meeting was with a number of Holstein breeders. All the other meetings were more general in nature, three of them being preceeded by tours on which dairy farms or other points of interest were visited. Fifty-five automobiles were counted on the tour at Montrose on Tuesday and over 200 persons attended the outdoor meeting following the tour.

Uncompahgre (continued)

Considerable interest has been created apparently by these meetings and it is believed that a material increase in the number of dairy cows on the project may be expected as a result of the meetings.

At the meeting on Tuesday a petition regarding tuberculin testing of dairy cattle in the Montrose district was passed through the audience and a large number of signatures were secured. A large percentage of the cattle in this district have already been subscribed and it is hoped that the petitions will be ready to send in to the State Veterinarian by August 1st.

A visit was made to the Duroc Jersey farm of Clements and Clements where a young boar was purchased for a Pig club member at Montrose who has been in the swine breeding business for four years as a result of his work in the Club. A very good pig was secured for \$15.00.

A visit was also made to the Holstein farm of Mr. Banks who has recently shipped his herd from Arkansas. This is one of the largest herds of purebred cattle on the Western slope and contains a number of cows holding official records. Mr. Banks plans to begin official testing as soon as the herd is in condition again, the cows having suffered considerably by reason of the change of location.

H. A. Ireland.

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The first part of the paper is devoted to a general discussion of the problem of the origin of life. It is shown that the problem is one of the most important and most difficult in the history of science. The author discusses the various theories of the origin of life, and shows that the most probable theory is that of spontaneous generation. He then discusses the evidence in favor of this theory, and shows that it is supported by the facts of the case. The second part of the paper is devoted to a discussion of the problem of the evolution of life. It is shown that the problem is one of the most important and most difficult in the history of science. The author discusses the various theories of the evolution of life, and shows that the most probable theory is that of natural selection. He then discusses the evidence in favor of this theory, and shows that it is supported by the facts of the case.

THE END

WEEKLY REPORTS
Of the Offices of
WESTERN IRRIGATION AGRICULTURE
And
DEMONSTRATIONS ON RECLAMATION PROJECTS

Vol. XX111

July 21, 1923

No 3 29

Western Irrigation Agriculture

Belle Fourche

The maximum temperature for the week ending July 21 was 94, minimum temperature 60, and precipitation Tr. The total precipitation for July up until the 13th was 3.51 inches. This is one inch above the average for the last 15 years.

All crops to date are in fine condition. The yields of grain, particularly wheat, might be disappointing due to rust. The grass pastures are also beginning to show damage although not to any serious extent. During the week all the corn was cultivated; beets and potatoes furrowed, and the remainder of the time was spent in preparing for the Farm Picnic, held on the 21st.

This was the Ninth Annual Farm Picnic. The day was ideal and there was approximately 2,000 people in attendance during the day and evening. The Fourth Boys Encampment was held during the week and this year was made into a joint camp for boys and girls. Thirty-eight boys and twenty girls were enrolled.

Beyer Aune.

Newlands

The meteorological data recorded at this station for the two-week period ending July 21 was as follows: Mean maximum, 92, maximum, 99 on the 22nd; mean minimum, 55, minimum, 43 on the 17th. No precipitation was recorded.

The general field work during this period consisted of beet, corn, and potato cultivation and one irrigation. The irrigation took in all plats excepting Y13.

The rye on Y13 and the barley on F6, F11, and B5 to 10 inclusive, was cut during this period. The yield in straw and grain on these plats will be given at a later date. When the balance of the grain is cut the threshing machine will be set up and all the grain threshed.

The grasshopper situation at the station at present is fairly well under control. The poisoned bran mash, mentioned in the last report, worked so well that all cultivated plats were given another application at a later date. It is possible now to find a great number of dead hoppers along the ditch banks and levees. The grass hopper catcher has also been used with great success.

It was necessary to spray the field beets during this period with a lead arsenate spray. A beetle was feeding on the tops to such an extent

1787-1788

1787-1788

1787-1788

1787-1788

The following is a list of the names of the persons who were present at the meeting of the Board of Directors of the Bank of the Commonwealth, held on the 17th day of January, 1788. The names are arranged in alphabetical order, and are followed by the names of the persons who were present at the meeting of the Board of Directors of the Bank of the Commonwealth, held on the 17th day of January, 1788. The names are arranged in alphabetical order, and are followed by the names of the persons who were present at the meeting of the Board of Directors of the Bank of the Commonwealth, held on the 17th day of January, 1788.

1787-1788

1787-1788

The following is a list of the names of the persons who were present at the meeting of the Board of Directors of the Bank of the Commonwealth, held on the 17th day of January, 1788. The names are arranged in alphabetical order, and are followed by the names of the persons who were present at the meeting of the Board of Directors of the Bank of the Commonwealth, held on the 17th day of January, 1788. The names are arranged in alphabetical order, and are followed by the names of the persons who were present at the meeting of the Board of Directors of the Bank of the Commonwealth, held on the 17th day of January, 1788.

Newlands (continued)

that some beets were almost completely defoliated.

E. W. Knight.

San Antonio

During the two weeks ending July 21 the following temperatures were recorded:- maximum 101, minimum 65, and greatest daily range 30. Precipitation occurred on four days, with a total of 2.16 inches for the period. Nine days were clear, four days were partly cloudy, and one day was cloudy.

Much damage has been done to cotton by the leaf worm (Alabama argillacea) in large areas throughout southwest Texas and extending into the Lower Rio Grande valley. Farmers have used all the common poisons; such as Paris Green, London Purple, etc, obtainable and are now using most anything available, from white arsenic and lime to stock dip. Cotton boll weevils have not been as serious a pest this season as they are ordinarily and present indications are that the cotton crop will be appreciably above average in the San Antonio region.

Work on the station has progressed practically without interruption. All milo plats in the rotation fields, all sorghum varieties in the variety test except Honey Sorgo, and the Dwarf Blackhead kafir on field AB8, were harvested. The kafir on AB8 was planted for the purpose of carrying on a Sorghum Midge control test. At the time the control measures were applied, however, there was no evidence of even a light infestation, and accordingly no value attached to the test. A late planting of milo, made on field C3 for testing out the same method of midge control, was quite heavily infested when rogued. Preliminary data indicated that midge injury was reduced to approximately 50% of what would normally have occurred, had no control measures been attempted.

Mr. H. H. Schutz, Statistician in charge of the work of the Office of Crop Estimates for the State of Texas, was a station visitor July 20.

Geo. T. Ratliffe.

Scottsbluff

The average maximum temperature for the week ending July 21, was 87, with a maximum of 91 on the 18th and 20th; the average minimum was 63, with a minimum of 61 on the 16th, 20th and 21st. The precipitation for the week was .03 inch, making a total for the season of 10.69 inches.

The corn in Fields C and K and the potatoes in Fields D and K were cultivated during the week. The potatoes were also sprayed for bugs.

Grain harvest in the valley has commenced. The barley in Fields C and D was harvested during the week. In a good many places the storm of the 14th lodged the grain quite badly.

The hailstorm on July 14 in the east end of the Project is the only destructive one this season so that the yields of grain will be fairly good over all the valley.

Scottsbluff (continued)

Preparations are being made for the annual Farm Picnic to be held on Thursday, August 2.

James A. Holden.

Yuma

The maximum temperature for the week ending July 21 was 108 degrees, minimum 66, greatest daily range 38, and precipitation 0.

The period of cloudy days, with threatening showers, continued throughout the week. As the alfalfa seed harvest is well under way, this kind of weather is still causing much concern. The high humidity, however, which accompanies this kind of weather is very desirable in harvesting the seed. Most of the harvesting work is done at night and early morning hours when there is much dew present.

The cotton crop on the project has just commenced to take on that rank growth in places where the soil is rich and where water has been applied too frequently. With the coming of humid weather the shedding of squares and young bolls is noticed.

Station work performed during the week included the planting of Indian corn, plats D-18 to 23, inclusive; cultivating grain sorghum, variety test, E-3-8; cultivating grain sorghum on the plat variation test, C-32-35; cleaning and repairing ditches; cutting date leaves for nursery shelter; general irrigating, cultivating and hoeing.

Edward G. Noble

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MISCELLANEOUS

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ALLOTMENT OF FUNDS, FISCAL YEAR 1924.

Western Irrigation Agriculture.

APPROPRIATION: General Expenses, B. P. I. 1924 (Western Irrigation Agriculture)..... \$90,640.00

Station	: Allotment	: Expenditures	: Estimated	: Allotment
	: 1923	: 1923	: 1924	: 1924
Bard, California ...	\$15,000.00	\$13,103.89	\$15,200.00	\$14,500.00
Huntley, Montana....	13,000.00	13,619.15	15,710.00	14,000.00
Newell, S. Dakota ...	14,000.00	14,900.21	15,000.00	14,500.00
Mitchell, Nebraska..	10,000.00	10,595.97	13,420.00	10,000.00
Fallon, Nevada,.....	10,000.00	11,403.40	11,306.00	10,000.00
Hermiston, Oregon...	3,000.00	2,894.90	3,000.00	3,000.00
San Antonio, Texas...	10,500.00	11,000.00	13,021.00	10,500.00
Prosser, Washington	3,000.00	3,071.37	3,000.00	3,000.00
Washington, D. C. &				
Tucson Lab.	14,030.00	12,673.79	13,000.00	11,140.00
Totals	92,530.00	93,264.68	102,641.00	90,640.00

The total appropriation for the work of this office during the fiscal year 1924 is \$94,420.00. The Secretary has directed that, in addition to the regular 2% Bureau reserve, a 2% reserve of all Department funds be set aside for emergency expenditure and this fund will be available for expenditure only through authority of the Secretary. This leaves a total of \$90,640.00 available for allotment to the various farms. It is urgently recommended that every effort be made to keep expenditures within the amount allotted to each station.

C. S. S.

Belle Fourche

Nearly all of the week ending July 21 was spent at the experiment farm aiding in the conducting of the annual camp for boys and girls. The boys had classes, demonstrations, and judging in hogs, dairy animals, sheep, and poultry as livestock work, and in corn as the principal crop work. The girls attended classes in poultry and domestic science. The State club leader P. J. Scarbro had charge of the camp. He was assisted by two extension women workers that looked after the girls. Instructors from the experiment farm, two county agents, and a Smith-Hughes teacher carried out the boys' program. This summer 40 boys and 21 girls attended the camp which was judged one of the best camps ever held in the State.

On Saturday the annual farm picnic took place at the experiment farm under ideal weather conditions with an estimated attendance of 2,000. Dean Larsen, of South Dakota State College, was the principal speaker. Sports took up half of the afternoon and a big dance in the barn furnished amusement during the evening.

Frank E. Miller.

Sun River

Practical demonstrations were given during the week ending July 21 to those farmers who had never irrigated on large areas before. The field methods of handling a large head of water were shown. All irrigation at present is on the alfalfa. Due to the frequent rains the grain, with the possible exception of that which was planted late will mature without any irrigation.

Further aid was given this week to those farmers raising sugar beets. A call for help was sent to the Great Western Sugar Co. and they sent an experienced beet man to finish the thinning and hoeing. One day was spent on the Fort Shaw division. Every field of sugar beets was visited and actual demonstrations of the cultivating hoeing and weeding the beets were given. Many patches were in immediate need of hoeing and cultivation. The beets on this division show a very thrifty growth and some stands give possibilities of a heavy tonnage.

The grasshopper situation remains about the same. Now that the 'hoppers have wings catchers are proving more effective than poisoning. The damage on the wheat by the grasshoppers will not be excessive unless they begin cutting off the heads. They are, however, very destructive on the alfalfa blossoms and none of the hay this year will be saved for seed.

Blaine Kelsey.

Shoshone

During the week ending July 21 live stock judging was conducted at two club meetings. Milk samples from 4 herds were tested and some work done on milk sheets. Two dairymen were visited in relation to diseases in calves. A flock of 100 hens was culled for Mr. Johnston, southeast of

THE UNIVERSITY OF CHICAGO

The University of Chicago is a private institution of higher learning, founded in 1837. It is one of the oldest and most distinguished universities in the United States. The university is located in Chicago, Illinois, and is the largest university in the Midwest. It is a member of the Association of American Universities and the Ivy League. The university is known for its research and scholarship, and has produced many notable alumni, including several Nobel Prize winners. The university is also known for its commitment to social justice and public service. The university is a member of the Association of American Universities and the Ivy League. The university is known for its research and scholarship, and has produced many notable alumni, including several Nobel Prize winners. The university is also known for its commitment to social justice and public service.

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Shoshone (continued)

Powell, three other poultry producers being present to learn culling methods. An article giving information about the cost of shipping dairy products was completed for the local paper.

A carload of lambs weighing 70 lbs. could be assembled at this time if owners of farm flocks were in agreement about the advisability of selling. The matter has received much attention during the past few days, requests for market information being numerous. It now seems likely that no sale will take place before August 10. Late selling turned out well both last year and the year before and there is a disposition on the part of several growers to try it again.

G. A. Wright.

North Platte

During the week ending July 21 four auto trips were made with pig and calf clubs. One-half day was given to each club. The boys and girls met with the local leader and after having a business meeting, a tour was made calling at the home of each member where the pigs and calves were seen. Methods of feeding and care were explained and discussed. Individual demonstrations were given and some practice judging was done, both at the homes of the club members and in the herds of breeders in the community.

A flock of hens was culled for Mrs. Russell north of Scottsbluff. Mrs. Russell is buying some White Leghorns and wanted her original flock of mixed hens culled pretty closely. About three-fourths of them were either old or poor individuals.

At the request of Fred Sweitzig in Spottedtail community, a trip was made to his farm where his chickens were dying. Examination showed that his loss was due to arsenic poisoning. Arsenic had been used in spraying potatoes near the barnyard.

D. H. Propps.

---cOo---

W E E K L Y R E P O R T S

Of the Offices of

WESTERN IRRIGATION AGRICULTURE And DEMONSTRATIONS ON RECLAMATION PROJECTS

Vol. ~~XXIV~~ ~~XXIII~~

July 28, 1923.

No 4 30

Western Irrigation Agriculture

Huntley

The maximum temperature for the two weeks ending July 28, was 105, minimum 55, and precipitation 3.11 inches.

Unusually heavy rains for this season of the year have occurred during the past week. Precipitation, amounting to 1.87 inches on July 24, caused slight damage to the main canal and to roads and bridges in various sections of the valley. This storm was general over this section and very damaging hail occurred in other parts of the valley, both above and below the Huntley Project. No hail damage was reported on any part of the project so far this season and crops are generally in good condition. The harvest of grains on both irrigated and dry lands is well under way.

Drs. E. D. and C. R. Ball of the U. S. Department of Agriculture and Mr. J. M. Stephens of the Office of Dry Land Agriculture were visitors at the Station on July 18.

Dan Hansen.

Scottsbluff

The average maximum temperature for the week ending July 28, was 85, with a maximum of 91 on the 22nd; the average minimum was 59, with a minimum of 49 on the 22nd. The precipitation was 0.83 inch coming in four showers on the 23rd, 24th, 25th and 28th. Total precipitation for the season, 11.52 inches.

The harvesting of grain was completed during the week. The second cutting of alfalfa was started and put in the shock. Some of the grass pastures were irrigated. The balance of the week was spent in miscellaneous odd jobs and getting ready for the annual picnic.

The rains during the past week or two have kept all crops growing nicely. There have been very heavy rains over most of the project during the week, in places amounting to over 2 inches, but with none of the rains has there been hail. With the exception of the one hailstorm north of Minatare, the loss from hail so far, has been much below the average.

James A. Holden.

THE UNIVERSITY OF CHICAGO
DIVISION OF THE PHYSICAL SCIENCES
DEPARTMENT OF CHEMISTRY

REPORT OF THE
COMMISSIONERS OF THE
UNIVERSITY OF CHICAGO
FOR THE YEAR 1900-1901
PUBLISHED BY THE UNIVERSITY OF CHICAGO PRESS
CHICAGO, ILL., 1901

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THE UNIVERSITY OF CHICAGO
DIVISION OF THE PHYSICAL SCIENCES
DEPARTMENT OF CHEMISTRY

Demonstrations on Reclamation ProjectsBelle Fourche

Due to heavy rains with resulting greasy roads but three days of the week ending July 28 were spent in field work.

The shipping of wool will be about completed the coming week. Thirteen car loads of wool from Belle Fourche and two from Newell have left for Chicago to be marketed by the National Wool Warehouse & Storage Company, a strictly growers organization handling wool on a commission basis only. Two more cars are lined up to leave Newell the coming week and one or two from Belle Fourche.

Grasshoppers are still a serious menace in many places. Calls for poison bait, which is supplied at cost, are numerous.

Frank E. Miller.

Newlands

During the week ending July 21 considerable time was devoted to locating Jersey cows for a new herd and Jersey bulls for three purchasers.

A cooperative shipment of beef was sent out on Thursday. Fat cows brought $4\frac{1}{2}$ cents per pound at Reno, Nevada.

During the week ending July 28, assistance was rendered in the selection of a herd of twelve head of Holsteins and two Holstein bulls. The demand for dairy cattle is strong. People, who have not heretofore owned dairy herds, are scouting around in the effort to acquire dairy cattle.

Assistance was rendered in a stubborn case of milk fever. With instructions from this office, the case was handled by the owner with very satisfactory results. The subject of blackhead in turkeys required some attention during the week. One article to the local press was contributed on this subject. One article on tuberculosis eradication and one on farming in the Fernley district was contributed.

L. E. Cline.

North Platte.

Oliver M. Summers, poultry specialist for the State Extension Service, was in the Valley the first two days of the week ending July 28. Some time was spent with him visiting flocks, paying particular attention to poultry diseases. Culling demonstrations were given at four different farms.

All of the pig club members in Scottsbluff county were visited this week and the registration names and numbers of their pigs collected, and forwarded to the different breed associations who are offering prizes for pigs shown at the County Fair. About 50 pigs, representing five different breeds, will be shown by the boys and girls. One pig club meeting was held at Henry.

Sick hogs were reported near Minatare and assistance asked for. Examination showed symptoms of cholera. The herd, consisting of 240 head, is just across the road from a herd that was vaccinated the first of the month.

During the week a trip was made to Torrington and Ft. Laramie, Wyo.,

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THE UNIVERSITY OF CHICAGO

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North Platte (continued)

in the interest of the work in that part of the project. Conferences were held with the Smith-Hughes teachers and County Agent Duperduis.

D. H. Propps.

Minidoka

The work of the week ending July 21 consisted of conferences with Dr. Sullivan of the B. A. I. and Dr. Smith, State Veterinarian for Idaho, in planning the area-wide tuberculin test for Minidoka and Cassia Counties.

Experimental pigs are coming along fine, especially a litter of eight Durocs owned by Gaylord Pike. The pigs at 120 days of age averaged 133 pounds. The heaviest pig weighed 150 pounds. Other co-operators in the experiment have been showing fair results but none quite so good as Mr. Pike.

During the week ending July 28, Rupert put on a Pioneer Day celebration to commemorate the settlement of the intermountain section by the pioneers of '47 to '50, and for the first time since the agriculturist has been at this station a large group of people collected and enjoyed the day in the same spirit that was manifested three or four years ago. This occasion showed that project farmers are feeling much more hopeful and cheerful than they have for some time.

The Agriculturist attended the Southern Idaho Shorthorn Breeders' Meeting at Filer in company with project breeders who belong to this association. The principal matter of interest was securing a Shorthorn field man for southern Idaho. The officers of the Minni-Cassia Shorthorn Breeders' Association made part of a committee to investigate the cost and consider applicants for the position of field man.

Considerable time was spent preparing for the project-wide tuberculin test which is to begin Monday, August 30th.

Cheese factories report an appreciable increase in the amount of milk received at each station.

John T. Montgomery.

Shoshone

Club work, milk testing and assisting with dairy problems, and miscellaneous live stock activities engaged the attention of the Agriculturist during most of the week ending July 28.

The annual county farmers picnic was held, July 25 under the auspices of the Farm Bureau near Sage Creek. A varied program of excellent quality entertained those in attendance after dinner. The attendance was about the same as last year.

The Powell Creamery churned 4000 pounds of butter during the four weeks ending July 28. This is almost twice as much as was ever churned in the same time by the factory under the former management, and the quality of the product is such that it finds a ready sale.

A conference of grasshopper control officials in reference to the situation showed that in communities where cooperation has been good the

1. The first part of the document is a letter from the President of the United States to the Congress, dated January 1, 1861. It is a very important document, as it is the first official communication from the President to the Congress since the inauguration of Abraham Lincoln. The letter is written in a very formal and dignified style, and it contains a great deal of information about the state of the Union at that time. It is a very interesting document to read, as it gives us a glimpse into the mind of the President and the state of the country at that time.

1892

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Shoshone (continued)

control campaign has been effective, and it was decided to reduce the number of mixing stations and also change the location of some.

G. A. Wright.

Sun River

Further help was given during the week ending July 28 to those farmers who have had little or no experience in irrigating. Most of these new irrigators are afraid at first to handle a large head. They order about two second feet of water and divide it into two or three parts and then attempt to irrigate with these small streams. Most of the fields have not received any work towards making them easier for irrigation and it is difficult therefore to cover all of the land with water. A large number of sub-laterals is usually required.

The grasshopper situation looks very encouraging at present. A visit was made to Great Falls and County Agent McSpadden was interviewed with regard to grasshopper control measures. He reports that the fungus disease, magot fly and red mite are killing the 'hoppers in some sections. Some of these parasites are at work in this district. However, during the past week there has been a heavy migration from this region. Unless the remaining 'hoppers start to nip off the wheat heads, the damage to the grain will not be heavy.

The trial fields of sugar beets on the Fairfield Division were hoed and cultivated this week. The beets on the Fort Shaw Division were visited on Tuesday and Thursday. Information relative to their irrigation and cultivation was given.

The weather conditions for the past week have been excellent for the crops. All of the first crop of alfalfa is cut and irrigated. The grain is ripening fast and harvesting will start next week. Most of the potatoes are in full bloom.

Blaine Kelsey.

Uncompahgre

Work in connection with tuberculin testing occupied the first part of the week ending July 21, 1923. The petitions to the State Veterinarian for a tuberculosis eradication area have been pretty well circulated and have met no opposition. It is not certain, however, that funds will be sufficient to permit the testing of all cattle in this area.

County Agent McCann of Mesa was conferred with relative to program and work of Extension workers conference to be held on Grand Mesa July 23 to 27, and one trip was made to the Mesa with County Agent King to assist in arrangements for the conference.

Visits were made to four men regarding stock for sale and one Duroc-Jersey boar was bought last week and delivered to a club member who has been breeding purebred hogs for the past four years.

Milk tests were run for four men.

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Uncompahgre (continued)

Friday and Saturday of the week ending July 28 were given to office work and to making arrangements for work with two state specialists in Delta county next week.

The trip to Grand Mesa for the state conference was made on Sunday as the program was to begin at 8:00 o'clock A.M. Monday.

The conference occupied four days, the program covering all phases of extension work. Practically every member of the State extension staff was present in addition to a number of men from the Forest Service, U. S. Biological Survey and others. It was voted to hold the next annual summer conference at the State Agricultural College.

H. A. Ireland.

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WEEKLY REPORTS

Of the Offices of

WESTERN IRRIGATION AGRICULTURE And DEMONSTRATIONS ON RECLAMATION PROJECTS

Vol. ~~XXIV~~ XXIII

August 4, 1923

No 5 32

San Antonio

Western Irrigation Agriculture

During the two weeks ending August 4 the following meteorological data were recorded:- Maximum temperature 101, minimum 68, greatest daily range 30. and precipitation 0.0. Thirteen days were clear and one day was partly cloudy.

Boll weevils have become very plentiful and cotton has nearly stopped blooming. Leaf worms have spread to practically all cotton fields, the plants on those most heavily damaged being entirely defoliated. They have not yet become seriously numerous on the station except in limited, small areas. Poisoning will, however, be attempted during the following week. Early bolls are beginning to open on all fields.

Work on the station has included the cultivation of all cotton and orchards; mowing Sudan grass and Sumac sorghum on rotation plats and Rhodes grass on fields A3, B3 and B4; plowing milo stubble in the rotation fields; and threshing milo from the rotations and the early grain sorghums from the variety test. The following table shows the yield of milo grain and stover from the rotation and tillage plats.

Plat :	Crop Sequence and Treatment	Yield per acre			Estimate
		Grain	Stover	bird	
		Bushels	Tons	damage	%
A4-14	:Milo (Field Peas) P. Spring; Sorghum, P. Nov.				
	:Cotton, P. Fall; Oats, P. June	41.4	1.75	5	
18	:Do. except peas after milo is harvested for hay:	44.1	1.51	2	
	:	:	:	:	
A5-1	:Milo, P. July; Oats, P. June; Cotton, P. Nov.	45.6	1.78	2	
4	:Do. except barnyard manure applied after cotton:	31.7	1.01	13	
7	:Milo, P. July; Cotton, P. Fall; Oats, P. June;				
	: Cotton, P. Nov.	45.6	1.81	5	
11	:Do. except barnyard manure applied after milo				
	: and cowpeas for green manure; plowed in fall				
	: follow oats	50.9	1.70	5	
15	:Same as A5-11 except land is plowed and subsoil-				
	: ed following milo and cowpeas	50.0	1.62	7	
	:	:	:	:	
A6-1	:Milo, P. July - continuously cropped	32.9	1.52	10	
2	:Milo, (manure) P. July - continuously cropped	43.1	1.65	12	
6	:Milo, P. July; Oats, P. May	35.0	1.97	12	
14	:Milo, P. Fall; Corn, P. July	37.9	1.94	15	
	:	:	:	:	
B4-15	:Milo, P. July; Cotton, P. Nov; Sudan grass, P. Nov.:	39.7	1.58	0	
18	:Milo, P. July; Cotton, P. Nov; Oats, Field Peas,				
	: P. Spring	42.4	1.51	0	
B5-18	:Milo, P. July; Cotton, P. Nov.	48.8	1.95	0	
Average:		42.1	1.66		

San Antonio (continued)

(1) Stover weights are comparable but are not "air dry".

The average yield of milo, 42.1 bushels per acre, is the highest obtained at this station during the past thirteen years with one exception, 47.7 bushels per acre having been obtained in 1913. The average yield for the thirteen years 1911 to 1923, inclusive, is 27.5 bushels per acre. Long skips in many rows, the cause for which was not determined, reduced the stand on all plats and no doubt materially lowered the resultant yields.

Geo. T. Ratliffe.

Demonstrations on Reclamation ProjectsBelle Fourche

One day of the week ending August 4 was spent in going over the project with J. Hetland of the State college investigating hopper damage and the effectiveness of hopper control.

An enthusiastic club meeting was held in Vale. Material has been furnished to aid the members in selecting a demonstration team and putting on a demonstration at the county fair. Alfalfa and its value to the project may be the subject discussed.

Two demonstrations on the disease and treatment of hog mange were given. In each case Dr. Flory, a government veterinarian, added interest by using his microscope to show up the mites. One demonstration on the treatment of hogs for worms was given.

Cholera vaccine and hopper poison was delivered to four farmers upon request.

One day was spent north of the project where some 6,000 sheep are being dipped for scab.

Frank E. Miller.

Minidoka

The work of the week ending August 4 was somewhat upset by the postponement of the beginning of the tuberculin test for one week.

Farmers on the south side or pumping unit of Minidoka Project are trying to arrive at some plan by which more water may be secured during the peak use in July and the first of August. Considerable crop damage is reported on the south half of the project, particularly to alfalfa crops which suffered for water that was being used on the potatoes and beets.

The Shorthorn Breeders on the project are trying to organize a project exhibit of shorthorns for neighboring fairs.

Cheese factories have been obliged to order extra vats for four factories, the capacity of the 75 to 8500 pound vats being insufficient for the milk that farmers wish to sell to the factories. Farmers are receiving at this writing approximately \$800.00 a day for milk delivered to the cheese factories.

Utah buyers purchased a car of cattle on the project to ship to Cache Valley this week.

John.T. Montgomery.

Newlands

The subject of hog cholera has required much attention during the week. An outbreak of hog cholera was discovered on one of the ranches on Monday.

Newlands (continued)

At this time six sows had died, one sow was sick and one shoat was sick. Assistance was secured the following morning from the State University. Upon the visit of the veterinarian, a second post mortem was made and the trouble was diagnosed as cholera. By this time ten hogs had died. This outbreak of hog cholera caused considerable anxiety on the part of ranchers as it was the first outbreak for eight years. Every effort will be made to prevent the spread of cholera from this ranch. The remaining hogs on the place were hyperimmunized as well as those on an adjacent ranch, which had access to a flowing stream of water which passed through the first ranch.

Considerable attention has been given to the subject of vaccination against contagious abortion in this project. In cooperation with the state veterinarian a large number of dairy herds in the valley are being immunized against contagious abortion by the use of cultures of living abortion organisms. This work has been going on for over a year and the results obtained so far are very encouraging and the number of applications for this work is rapidly increasing. The expense per animal is 75 cents. The animals are vaccinated only when they are not carrying a calf. The dairy herds of this valley are quite generally troubled with contagious abortion, and this method of treatment shows every evidence of overcoming much of the discouragements of the dairymen on account of abortion.

L. E. Cline.

Sun River

The work with the sugar beets was continued during the week ending August 4. The beets on the Fort Shaw Division were in need of irrigation. Almost every farmer raising beets was visited and help given towards furrowing and irrigating. Not a single farmer on this division has had any experience at all in raising sugar beets. It is therefore necessary to give a few practical demonstrations in working the beets on every farm.

I. D. O'Donnell, representative of the Great Northern Railroad and Great Western Sugar Company was a visitor on the project Friday. He is interested in promoting the sugar beet industry in this section. The day was spent in visiting the sugar beet fields. Mr. O'Donnell was satisfied with the present showing and he was of the opinion that sugar beets could be made a standard crop in this section of the state.

From the present indications, the damage to the crops by grasshoppers will not be as heavy as was at first predicted. Grain harvesting will be well under way next week.

Blaine Kelsey.

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1870-1871

Uncompahgre

Most of the week ending August 4 was spent with boys' clubs. Two corn club meetings were attended, eleven pig club members were visited and several of the first year pigs were weighed. Good gains have been made by all the pigs weighed and all but one show very good type.

Several men of Delta were seen with reference to taking up tuberculin test work around Delta and it is believed that Delta will soon take some action similar to that taken by Montrose and Grand Junction.

Two calls were made regarding silos in which there has been some interest this year. A great many silos built previously have stood empty for several years. Some of these are of a cement stave type which can possibly be moved.

Milk tests were made for two men and poultry was culled for two others. Arrangements were made to weigh two bunches of hogs to be used in hogging off crops. A formula for pasture grass mixture was furnished two men. A dairy herd record book was furnished one man who wished to begin keeping dairy records. Seven men have called to list cows wanted later in the year.

H. A. Ireland.

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WEEKLY REPORTS

Of the Offices of

WESTERN IRRIGATION AGRICULTURE

And

DEMONSTRATIONS ON RECLAMATION PROJECTS

Vol. ~~XIV~~ XXVII

August 11, 1923

No 6 31

Western Irrigation Agriculture

Newlands

The meteorological data recorded at this station for the period July 23 to August 6 is as follows: mean maximum temperature, 94; maximum temperature 101 on the 27th and 28th; mean minimum, 55; minimum 41 on the 4th. No precipitation was recorded.

Mr. Fred C. Meier, Extension Pathologist, U. S. Department of Agriculture, accompanied by Mr. C. W. Creel, Director of Extension in the State of Nevada, and Prof. P. A. Lehenbauer, Plant Pathologist of the State University, visited the station and project on July 27. Mr. Meier was chiefly concerned with potato diseases. Several of the larger fields were visited and the potato vines carefully inspected for disease conditions. Mr. Meier found the diseases most prevalent here to be Mosaic and Fusarium. A few plants were also found showing what is termed as "sprindly-sprout" and a little Rhizoctoria. Mr. Meier's inspection of these fields was very instructive to all those who accompanied him. Several typical Mosaic diseased plants were marked. It is planned to visit these plants from time to time throughout the growing season and to make a later check on them at harvesting time.

The orchard this year promises to have a record crop. Some of the earlier fruits have been picked. As soon as the later varieties are harvested, a complete report will be made showing the yields per tree of each variety.

There has been one general irrigation during the period. All plants were irrigated except B5, 6, 7, 8, 9, 10; C7; D2, 6; E3, 4, 5, 6; F6, 8, 11, 12; H3, 4, 9, 10, 11; and Y13.

All grain with the exception of the oats has been cut and threshed. The following table gives the results;-

Newlands (continued)

GRAIN YIELDS, U. S. EXPERIMENT FARM, FALLON, NEVADA, 1923.

Plot	: Area	: Crop	: Yield	: Yield	: Yield of Grain	:
	: Acres		: Straw	: Grain	: per Acre	:
			: &	: Lbs.	: lbs.	:
			: Grain			:
			: lbs.			:
Y 13	: .45	: Rye	: 990	: 436	: 970	:
B5-10	: 2.41	: Barley	:	: 354	: 147	:
F 11	: .25	: "	: 295	: 162	: 648	:
F 6	: .25	: "	: 125	: 58	: 232	:
F 12	: .25	: Wheat	: 555	: 220	: 880	:
F 8	: .25	: "	: 395	: 147	: 588	:
D 2	: .32	: "	: 490	: 180	: 563	:
D 6	: .52	: "	: 645	: 262	: 504	:
E 3	: .58	: "	: 1830	: 802	: 1383	:
E 4	: .59	: "	: 1490	: 602	: 1021	:
E 5	: .57	: "	: 1490	: 604	: 1058	:
E 6	: .54	: "	: 1220	: 460	: 853	:
H3-4	: .88	: "	:	: 551	: 626	:

E. W. Knight.

Huntley

The maximum temperature for the week ending August 11 was 88, minimum 48, and precipitation .02 inch.

Following a period of unusually heavy rains for this season, weather conditions were favorable for field work during the week. The second crop of alfalfa was harvested and was put up in good condition.

Harvesting of grain crops is well under way and threshing was begun in the valley during the week. Yields of both irrigated and dry land grains will be fairly good.

Mr. F. D. Farrell of the Kansas Experiment Station was a visitor during the week.

Dan Hansen.

Scottsbluff

The average maximum temperature for the two-week period was 83 with a maximum of 93 on the 30th; the minimum average was 58 with a minimum of 58 on the 30th. The precipitation was 1.05 inches, making a total for the season of 12.47 inches.

During the first half of the period, the second cutting of alfalfa went into the stack. This was delayed considerably by the wet weather and hay was somewhat damaged. The yields were fairly good and are given on the attached sheet.

The annual picnic was held on the 2nd of August and was a success. The attendance was estimated at 2,000 and more interest is being evidenced in the work of the Farm than ever before.

The latter half of the period has been spent in cleaning up from the picnic, miscellaneous jobs, repairing equipment and getting ready for grain threshing. Threshing throughout the Valley is being seriously hindered on account of the rainy weather.

James A. Holden.

Demonstrations on Reclamation ProjectsBelle Fourche

A very serious out-break of anthrax, causing heavy losses among cattle, occurred during the week ending August 11 in the Cheyenne River valley, some hundred miles east of the project. There is no immediate cause for alarm here but careful watch and observations on the part of the State Sanitary Board is maintained. Five hundred vaccine doses have been ordered for use here in case of necessity.

The first dipping of some 6,000 sheep for scab was completed during the week. It is now planned to have a rider constantly with the sheep who will be under State jurisdiction. With the exception of this one flock no other cases of scab are known in the county and all measures will be taken to clean up this bunch of sheep, see that they are kept from old bed grounds, and prevent further infection.

Belle Fourche (continued)

A boys and girls club picnic is planned later in the month at which time four demonstration teams will be picked from all of the clubs, and some, or all of them, after demonstrating at the county fair will be taken to the State fair. A dance in the pavillion at the fair grounds is scheduled to help defray expenses of taking the clubs to the State fair.

Frank E. Miller.

North Platte

During the week ending August 11 considerable time was spent in control of hog cholera. An outbreak near Melbeta made it necessary to vaccinate several herds in the community. A few of the purebred breeders have also been immunizing their herds.

The exhibit of hogs at the County Fair promises to be the largest in recent years. The Fair Board, with the help of contributions from breeders, is planning on putting a cement floor in the hog barn. This is an improvement that is very much needed.

The dairy work this week included a conference of farmers and business men of the Valley at the Lincoln Hotel, Scottsbluff, for the purpose of considering plans for stimulating the dairy industry in the Valley. A committee of five was appointed to formulate plans for sending a group of men to Wisconsin and Minnesota to pick up information in regard to dairying in those states and to bring back enthusiasm to impart to local farmers.

On Saturday a dairy meeting was held at Torrington in cooperation with the County Agent and the Smith-Hughes teachers in Goshen county.

Miscellaneous work during the week included a caponizing demonstration on Dutch Flats and attention to various livestock diseases.

D. H. Propps.

Sun River

Practical irrigation demonstrations were continued during the week ending August 11 in the sugar beet and alfalfa fields. All fields of beets on the Fort Shaw Division have been irrigated and in fields where the beets were small enough to permit, a final cultivation was given.

On farms visited where help was given in practical irrigation, the field laterals were all found too small. Few main laterals have been made large enough, by the farmer to carry even four second-feet, most of them will carry only one half this amount. These heads of water are generally subdivided again and as a result the duty of water is very low and the man labor per acre high.

The laterals on one farm were laid out and help was given one farmer in making a ditch through a heavy fill.

Sun River (continued)

At a meeting of the Fairfield citizens, Monday, it was decided to hold a Project Fair at Fairfield in September. This department was placed in charge of exhibits.

Four specimens of weeds were sent to the Experiment Station at Bozeman for identification. Twenty-four bulletins on sugar beets, potatoes, wheat, farm concrete construction, hogs, and irrigation, were given out during the week.

Blaine Kelsey

Uncompahgre

One day was spent in Delta County with Chris Johnson of the Salt Lake office, U. S. Dairy Division and R. Fish, deputy State Dairy Inspector on work in connection with cream grading. A 3 cent premium is paid for first grade cream and Mr. Johnson was working with the Delta County creameries and their patrons to improve the quality of cream delivered to the creameries.

Pigs were weighed for the rest of the first year club this week. One bunch of pigs was weighed and turned into field peas seeded in an orchard. The pigs are thrifty and weaners weighing 55 pounds each. The peas are a poor stand and no great results in the way of gains on the pigs are expected, but in view of the fact that most of our orchards need fertilization and especially the addition of humus to the soil it has been thought that peas seeded early and hogged off might prove to be an economical means of providing these things, hence this test should be of value.

One day was spent with livestock clubs on a stock judging tour. Three farms were visited, and dairy cattle and hogs judged.

Dr. Chas. G. Lamb, State Veterinarian and Dr. W. E. Howe of the U. S. Bureau of Animal Industry visited Montrose this week in connection with tuberculin test work. At a meeting with the city council and others interested in this work, it was agreed that an eradication area should be formed here, testing to begin sometime in October.

Six flocks of poultry were culled this week. The percentage of culls is running very high in some flocks, one flock having over 80% of culls, mostly late hatched birds.

H. A. Ireland.

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Of the Offices of

WESTERN IRRIGATION AGRICULTURE And DEMONSTRATIONS ON RECLAMATION PROJECTS

Vol XXIV XXIII

August 18, 1923

No 7 32

Western Irrigation Agriculture

Newlands

The meteorological data recorded at this station for the period August 6 to August 20 is as follows: Mean maximum 89.3; maximum temperature 95 on the 16th and 17th; mean minimum 52.3; minimum 45 on the 8th; rainfall .01 inches on the 12th and a trace on the 16th.

The harvesting of fruit still continues. There is such a large quantity of apples and plums this year, that it has been found necessary to distribute some among the farmers.

Due to the grasshopper invasion in the early summer, it was necessary to replant all those plats that had been previously seeded to alfalfa last spring. These plats were F8 and 12; D2 and 6; and H3 and 4. Plat C8 was replanted to sweet clover.

An experiment will be conducted this year with fall sown lettuce. There has been some question whether such a crop would not be a profitable one during the fall months. In order to determine this, some beds have been prepared and lettuce planted. One commission house representative has signed up several acres with some of the project farmers.

There have been two irrigations during this period. One on the 6th included plats Y1 to 12 inclusive, F9, H13 and 14. Another on the 16th took in B5 to 22 inclusive, C2 to 13 inclusive, all of D, E1 2, 7, and 8; all of F except plats 6 and 11, all of G, all of H except 9, 10 and 11. Y did not receive an irrigation at this time, as the alfalfa there was ready to cut.

The second crop of hay has been cut and stacked.

E. W. Knight.

Demonstrations on Reclamation Projects

Belle Fourche

Three federal veterinarians visited the project during the week ending August 18 to see that measures are taken to keep the flock of some 6,000 scabby sheep off infected ground after the second dipping which will be completed early the coming week. Sheep men are afraid of the scab and want all precautions taken to clean up this flock without its spreading to other flocks.

Anthrax has come no closer to the project and with a large force now working to check this disease stockmen feel better. Due to the wide spread of anthrax in this state no cattle can be shipped into Iowa unless

Belle Fourche (continued)

accompanied by a bill of health certificate.

Considerable time was given to work on demonstration teams which will compete for honors at the county fair and have an opportunity to go to the State fair. If possible, four teams will be taken to the State fair.

Frank E. Miller.

Minidoka

The principal accomplishment of the week ending August 11 was getting the tuberculosis test well under way. Approximately 3,000 cattle were tested and only one reactor was found.

The agriculturist wrote a Cattle Inspection and Milk Inspection Ordinance for the city of Rupert, which the council amended, making it somewhat more drastic, and passed unanimously with an emergency clause, for immediate enforcement.

During the week ending August 18 a number of the cattle on the project have had sore mouths which the veterinarian attributed to pollen of clover and sweet clover. The disease is not sufficiently widespread to cause serious loss to the project although individual owners lose the production of the cows until the ulcers in the mouth heal. Veterinarians do not suggest any remedy other than local washes with mild disinfectants.

The Poultry Excursion and Field Day on Friday was attended by ninety-six farmers and their wives. Mr. J. E. Nessly of the Idaho Farm and Poultry Division of the University of Idaho, made excellent talks. Mr. Moore suggested the following ration for Idaho poultry:

No. 1 - Balanced Poultry RationScratchMash

15# wheat	:	12# bran
8# corn	:	4# corn or barley (ground fine)
8# barley	:	4# oats
Three quarts fed in morning	:	4# to 6# pea meal or flour
Five quarts fed in evening	:	1# powdered charcoal
((Eight quarts per 100 hens per day.))	:	This mash is kept before hens at all times in self feeding hoppers.
	:	With this mash feed 26# of sour milk per 100 hens.

No. II. Balanced Poultry RationScratchMash

15# wheat	:	5 1/2# beef
8# corn	:	8# bran
8# barley	:	4# corn and barley

Minidoka (continued)No. II. Balanced Poultry Ration (continued)

<u>Scratch</u>	<u>Mash</u>
	: 4# oats
Three quarts fed in morning	: 1# powdered charcoal
Five quarts fed in evening	:
(Eight quarts per 100 hens	: This mash is kept before hens at
per day.)	: all times in self feeding hoppers.
	:

Mr. W. H. Disney of Rupert, a grocer, suggested ways in which farmers might improve the quality of the eggs they bring to market.

The cost of producing eggs on the project from November 1 to date averages between twelve and thirteen cents a dozen. The selling price from June 1 to date averages eighteen cents.

The tuberculosis test is progressing nicely with approximately 5,800 cattle tested and four reactors located.

J. T. Montgomery.

Shoshone

During the four days of the week ending August 18, 1923, three club meetings were conducted including drill in stock judging. A trip to Frannie and Deaver was made also to attend to requests for assistance with soil and dairy problems. Requests of a miscellaneous nature consumed the remaining time.

G. A. Wright.

Sun River

Preliminary work for the Project Fair was begun the week ending August 18. This department has been placed in charge of all exhibits. An effort is being made to induce as many people as possible to place some of their crops on exhibit. A letter was sent to each farmer telling about the Fair and giving a suggestive list of displays. Merchants and manufacturers of this section will also be given an opportunity to display their products. It is the present intention to send the best exhibits to the State Fair at Helena.

Most of the farmers who have been interviewed have expressed a warm interest in the coming Fair and have promised their help in furnishing exhibits. Fair plans have been discussed with the County Agent of both counties in which the project is located and they have promised their support.

A number of fields of ripened wheat that were damaged earlier in the season by the grasshoppers have been examined to determine if the heads were filling properly. Most of them appeared to be filling as well as those that had received little or no damage. Furthermore the hoppers are not cutting

Sun River (continued)

off the wheat heads as was at first feared. They are working quite severely on the oats, however. They cut the small thread that holds the oat to the stem. It is generally necessary to harvest them before they are fully matured.

The weather during the past week has been excellent for harvesting. About fifty per cent of the grain is cut.

Blaine Kelsey.

Uncompahgre

The Olathe livestock clubs were taken on a stock judging tour the first of the week ending August 18. Four farms were visited and Holstein and Jersey cattle and Poland China hogs were judged.

City officials of Olathe were conferred with, relative to tuberculin testing of dairy cows. Olathe wishes to be included in the eradication area to be formed around Montrose in order to provide tuberculosis-free milk for the town.

Four flocks of poultry were culled, 20 persons being present at the demonstrations. The flocks inspected to date have run over 50% culls. Culling by owners of their own flocks is becoming quite common as a result of previous demonstrations, this work having been carried on in every part of the valley by the County Agent or the Project Agriculturist.

Milk tests were run for 11 men, two of these having requested regular tests to begin this month.

Unprecedented rains have occurred in the valley during the past two or three weeks. These have been more local than general, some sections having been visited several times by severe storms that have caused heavy losses to crops as well as damages to roads and ditches. The second crop of hay is nearly worthless as a result of these rains and wheat harvest has been seriously interrupted.

H. A. Ireland.

WEEKLY REPORTS

Of the Offices of

WESTERN IRRIGATION AGRICULTURE And DEMONSTRATIONS ON RECLAMATION PROJECTS

Vol XXIV XXIII

August 25, 1923

No. 8 33

Western Irrigation Agriculture

Huntley

For the two weeks ending August 25 the maximum temperature was 98, minimum 50 and precipitation 1.53 inches.

Threshing which was begun in most parts of the valley was interrupted by rains during the week. Damage to grain in the shock is reported in many sections due to excessive amounts of rain. Temperatures during most of the month have been below normal.

The 16th Annual Huntley Project picnic was held at the Experiment Farm on August 18. The attendance was estimated to be about 1,000 people. Attorney General W. D. Rankin was the speaker of the occasion.

Station work during the two weeks included threshing of dry-land grains and irrigation of alfalfa, beets and potatoes.

Dan Hansen.

Scottsbluff

The average maximum temperature for the week ending August 25 was 79 with a maximum of 86 on the 19th; the average minimum was 49 with a minimum of 47 on the 24th. No precipitation was recorded during the week.

The grain plats in field K and the barley in 3-A, 4-A, 2-C and the north half of D were threshed the first of the week. In Field K the yields were light and are given in the attached table. The barley yielded at the rate of 68 bushels per acre, which is rather a light yield.

During the forenoon of the 23rd, the Nebraska Irrigation Association, which has been in convention at Bridgeport during the week, visited the station. They were taken through a field trip and the work being done was briefly outlined.

In the afternoon of the same day the annual Potato Tour of the Nebraska Potato Association was entertained at the station and the experimental work which is being carried on by the Station and by the Horticultural department of the Lincoln Station was explained by the Superintendent and Mr. Werner.

The Superintendent attended the meeting of the Irrigation Association at Bridgeport and addressed the convention on the subject of "Profitable Systems of Farming".

W. P. Snyder, Superintendent of the North Platte Substation, Ellery F. Chilcott of the office of Dry Land Agriculture, Washington D. C.; and A. L. Hallstead and A. F. Swanson of the Fort Hays Branch Station, Kansas, were visitors during the week.

James A. Holden.

Yuma

For the two week period ending August 25 a maximum temperature of 106 degrees occurred on the 23rd, a minimum temperature of 60 on August 20; greatest daily range 45 also occurred on the 20th; on the 25th precipitation of .03 was recorded.

The threshing of alfalfa seed on the project is now being done mostly from stacks, the earlier seed having been hauled direct from the field to the thresher. Many growers still follow the practice of stacking and allowing the seed to go through a sweat. The average yield per acre of alfalfa seed this year promises to be slightly higher than for last season. The average yield per acre for the entire project for the season of 1922 was 212 pounds. The price of seed has remained fairly steady around 15 cents per pound with not a large amount moving at this figure.

The condition of cotton continues to be very favorable. While some picking and ginning has already been done, the season will not begin in earnest for two or three weeks. It is generally conceded that the average yield per acre will be increased over that of 1922.

Station work performed during the two weeks period has included the harvesting of the third cutting of alfalfa on the rotations and the alfalfa fertilizer test plats; cultivating grain sorghum and corn; cutting grass and weeds in irrigation ditches; hoeing borders and roadways; building repairs; general irrigating, cultivating, and hoeing.

E. G. Noble.

Demonstrations on Reclamation Projects.Belle Fourche

One day of the week ending August 25 was given over to a picnic for all the boys and girls in club work. About 65 members attended the picnic at the county fair grounds. Three demonstration teams gave a practice rehearsal. Classes were conducted in the scoring of livestock and cereal crops. After the picnic dinner late in the afternoon many of the club members stayed for the club dance in the evening. We expect to send demonstration teams in sewing, poultry culling, and farm management and either a team in livestock judging or cereal crops judging to the State fair.

Many calls for assistance were received to rid hogs and sheep from worms, for aid in fitting animals for the fair, and in filling out entry forms.

A number of farm calls were made with J. N. Rarick, the new Smith-Hughes teacher.

Frank E. Miller.

Newlands

During the week ending August 11 some time has been given over to the installation of a permanent agricultural exhibit. The use of two empty store buildings with show windows has been donated for exhibit purposes until they are leased. A permanent exhibit will be maintained featuring the various

Newlands (continued)

agricultural industries of the project. Dairying will be given special prominence. Some exhibit material, which was prepared for the Reno Industrial Show is being used to help form a background for the display of perishable fruits and vegetables which must be changed at intervals. A large oil painting of the Lahontan dam helps to form a background for the second exhibit. Field crops are featured mostly in this exhibit. It is planned to use these exhibits in an educational way and for the purpose of furnishing information for tourists and other strangers, who pass through the project. The exhibits are well lighted at night and are viewed only from the front and make a very pleasing display.

Annual leave was taken on the 15th of the week ending August 18 for a trip into the Yosemite Valley and other California points.

The work of the state fair which will be held in Fallon, September 12, 13 and 14 is being organized. Considerable time from this office is being devoted to it. This office will be largely responsible for the livestock and poultry exhibits and the success of these departments. A good premium list has been made. Several educational features are planned in this connection. Only registered stock will compete for premiums, but it is expected that with the large number of registered stock of all kinds on the project a good showing will be made.

The tuberculosis eradication campaign in this valley has just been completed. The results of the testing work are not yet available, but it is expected that the final figures will not show more than 1% of reactors. In a few instances where a large per cent of reactors were found with a first test, no reactors were found on a retest sixty days later.

L. E. Cline.

North Platte

During the week ending August 18 two bull club meetings were held. At each place farmers signed an agreement for the use of a purebred bull to be loaned by the Experiment Farm. There is a good demand for these bulls. Two more of them will be ready for service about the first of the year.

Interest in boys and girls club work continues to be good. The members are now busy fitting their pigs and calves for the county fair. A demonstration team from each club is practicing. Demonstrations will be put on at the fair.

Two herds of hogs were vaccinated. One of them is near Melbeta where there is a break. The other was given the double treatment.

Sickness was reported in two flocks of chickens. Examinations showed evidences of poisoning. A caponizing demonstration was given on Dutch Flats.

During the week ending August 25 the club year of 100 days closed for 3 pig clubs. The pigs were weighed and record books closed. The youngsters have a fine lot of pigs and will exhibit them at the County Fair September 5 to 7. Demonstration teams are busy practicing to put on demonstrations at the Fair.

A number of silos are now in process of construction. Mr. M. B. Quivey has just completed a solid concrete silo 16 x 40 using the Experiment Farm forms. R. S. Hunt is building one of cement blocks. Most of the farmers are

North Platte (continued)

making pit silos.

Mr. W. P. Snyder, superintendent of the North Platte Substation, was a visitor during the first part of the week. He was taken over a portion of the project during his visit.

The annual potato tour of the Nebraska Potato Growers Association spent about an hour at the farm on the afternoon of the 23rd. About 75 men were present and were taken through the experimental plats at the station. In addition to the local men there were in the tour Messrs. H. O. Werner and R. W. Goss of the Lincoln Agricultural College; J. Pedrett, President of the Association, Kimball; Wm. S. Stewart of the U. S. Department of Agriculture; G. L. Tiebout of the Louisiana College of Agriculture; County Agents Svoboda of Dawes, Grace of Box Butte and Hunt of Kimball.

D. H. Propps.

Shoshone

On Friday of the week ending August 25 a boys and girls livestock club tour was participated in by 35 members. A number of farms were visited, at four of which stock judging was done, and some of the best animals belonging to members were viewed. The county agent of Park County and the State Extension Livestock Specialist assisted.

The price of butterfat changed at the Powell Creamery on Saturday from 37 cents to 39 cents per pound.

Practically all sheep growers in the county sold their lambs during the last 10 days. They received 10 cents per pound on contract for future delivery for the most part, though a few got $10\frac{1}{4}$ cents. It is said that the larger part of them went to Colorado. Project feeders secured only a few. Sale of lambs at such a price has had a stimulating effect on the price of aged ewes. None are being offered at the present time for less than \$5.00. Twenty project farmers met the agriculturist on Saturday and took preliminary action towards securing about 2,000 ewes. The banks on the project are unable to assist at this time, so that the problem of financing is a perplexing one.

G. A. Wright.

Sun River

Due to the heavy rainfall during the early part of the week ending August 25 there has been very little water used. Most of the irrigating on this season's crop is over. Many farmers intend to do some fall irrigating, they report that the late season application of water has been very successful.

In a conference with County Agent Clarkson, the past season's grasshopper campaign was discussed. It was his firm opinion that the crop yield of Northern Montana was materially bettered by the use of grasshopper poison. Mr. Clarkson is sending out a letter to each farmer in Teton County asking a number of questions regarding the effectiveness of this year's poisoning.

Sun River (continued)

The general sentiment expressed by the replies from these questions will later be obtained from the county agent.

Fair plans are progressing. The premium list has been completed and will be ready for publication next week.

The experimental patches of sugar beets are showing a wonderful growth. Beets were taken last week that weighed three pounds.

Possibly two-thirds of the grain is cut. Threshing will begin next week.

Blaine Kelsey.

UNDERGROUND WATER CONDITIONS IN THE SALT RIVER VALLEY,
ARIZONA.

The Salt River Valley as here considered includes the body of land lying north of the Gila River, west of a line 32 miles east of the Gila and Salt River Base Meridian, south of a line 14 miles north of the Gila and Salt River Base Paralell and east of the Agua Fria. The underground water supply of this body of land is contributed to from the north by the Agua Fria and New River, from the northeast by Cave Creek and the Salt River, from the east by Queen Creek and from the southeast by the Gila. The Santa Cruz joins the Gila also from the southeast.

The Gila and Salt River enter the valley across the 32 mile east line with their beds at 1250 feet above sea level. The Gila crosses the 32 mile line at a point 19 miles south of the Base Line and Salt River 7.5 miles north of the Base Line. New River crosses the 14 - mile - north line at an elevation of 1100 feet 2.5 miles east of the Base Meridian while the Agua Fria comes in at 13 north 0.5 miles west at an elevation of 1075 feet above sea level. These rivers join the Gila at a point just west of the Initial Monument at an elevation of 925 feet above sea level. This junction is the drainage outlet for the valley.

Cave Creek and Queen Creek do not contribute surface water to the valley except during occasional floods. Their discharge is all absorbed in the valley fill.

The underground water conditions of the valley were studied by W. T. Lee during 1902 and 1903 ^{1/}. Prior to that time in 1897 Forbes had investigated the quality of the underground waters chiefly with a view to finding a supply of water suitable for use in a beet sugar factory which was later built at Glendale on the delta cone of Cave Creek where water was found containing less than 800 parts per million of total salts.

The investigation made by Lee was devoted largely to a consideration of the volume and depth of the ground water and the cost of pumping for irrigation but it included also a report on the quality of the water as determined by analysis made by Forbes, not only of samples collected by Lee but those taken earlier in connection with the quest for water for the sugar factory.

From the reports on depth to water made by Lee it is possible to sketch in the topographic features of the body of underground water as this existed 20 years ago, at which time the extent of the area irrigated was much smaller than it is at present. This survey was made before the construction of the reservoir at Roosevelt. At the time of this investigation it was found that there was a continuous body of water in the valley fill. The surface of this water was nearly as high as the river channels north and south, nearly but not quite. That is, there appears to have been a slight gradient away from the river channels.

^{1/} Lee, W. T. Underground Waters of Salt River Valley, Arizona. U. S. Geol. Survey. Water Supply Paper No. 136, 1905.

The gradient from east to west was substantially the same as that of the river channels i.e. about 8 feet to the mile.

This gradient was found not to be uniform however. It was found that the range of hills that extends across the Valley from the Estrella mountains on the south to the Phoenix mountains on the north including the Salt River mountains, Tempe Butte and the Camel Back constitute a barrier to the westward movement of the underground water. The gradient is somewhat flattened east of this barrier and the water west of it is much lower. Lines running north and south across the Valley fill either east or west of that barrier show that the surface of the underground water is nearly level though slightly higher near the river channels.

The westward gradient of the water table is less than that of the land so that the wells were more shallow in the trough south of Tempe and in the corner between the Salt and the Agua Fria west of Phoenix. The contribution of water from Cave Creek which enters the valley fill north of Phoenix not only lowers the concentration of the subsoil water in that district but raises the level somewhat.

The studies of the quality of the underground water showed that in general it contained about 2,000 parts per million of dissolved material. This is about 50 per cent more than the average salt content of the Gila and probably 3 times as high as the average discharge of Salt River. The contribution from Queen Creek, Cave Creek, New River and the Agua Fria appear to contain even less dissolved material than Salt River. It was noted in these earlier analyses that nearly all samples contained appreciable quantities of nitrate.

During the 20 years that have elapsed since Lee made his investigation there has been a large increase in the area of land irrigated and in the quantity of water annually diverted to the land. At the time Lee made his investigation it was apparent that salts were accumulating on the surface of the ground in low spots from the evaporation of underground water. This was true south of Tempe and west of Phoenix. A soil survey was made in the valley in 1900 by Means who reported and mapped the occurrence of salt accumulation in the two areas mentioned above.

The situation south of Tempe became sufficiently serious by 1914 so that a project for the construction of a drainage canal was proposed and such a canal was opened in 1916 and has functioned since that time. In 1918 it became obvious that some drainage relief would be necessary in the district west of Phoenix and a report on underground water conditions was made in February, 1919 by Elliot, Murphy and Code ^{1/}. They found that the underground water was getting dangerously close to the surface both north and south of Salt River and recommended that pumps be installed to the extent that 200,000 acre feet of water might be removed each year. They made no report on the quality of the water.

^{1/} Printed in pamphlet form.

Following the recommendations of Elliot, Murphy and Code, the Salt River Valley Water Users Association has installed 85 pumps in the valley both north and south of Salt River. During 1922 these pumps lifted 130,000 acre feet of water from the underground supply. During the same season other pumps lifted possibly 50,000 acre feet, while the gravity water diverted to the lands aggregated approximately 1,300,000 acre feet. The present indications are that the relief afforded by this purping, together with the discharge of the Tempe drainage canal is nearly, if not quite, equal to the net contribution to the underground supply. In other words, that the ground water is no longer rising. It should be noted that not all of the water pumped from the underground supply may be regarded as drainage. Much of this water is used for irrigation. The discharge from the pumps operated by the Water Users Association is analyzed at least twice each year and when the water is found to contain less than 1,500 parts per million of salt it is used to supplement the supply of gravity water. Nearly all of the 50,000 acre feet pumped from the other wells is used for irrigation. Some of this contains more than 1,500 parts per million of salt.

The salt content of the underground water of the valley varies between 600 and 5,000 parts per million. The number of pumps giving water of very low or very high salt content is small. The larger number fall between 1,500 and 2,500 parts per million. There is some variation also in the proportions of the constituents of the salt. In general the proportion of alkaline bases is approximately the same as that of the earthy bases. That is to say the calcium-sodium ratio is about 50-50. There are some marked exceptions, however, in both directions. On the acid side these underground waters have two characteristics that are unusual. The first is that the proportion of chlorine is much higher than the sulphate. In this respect the waters of this valley, or rather the waters of the Gila drainage system differ from those of any other important irrigation waters in this country. The second peculiarity of these underground waters is that they contain appreciable quantities of nitrate, probably not far from 20 parts per million. In this respect the underground waters differ from the surface waters contributed by the Salt and Gila Rivers. Except for the nitrates the dissolved constituents of the underground waters occur in much the same proportions as they do in the surface waters though the total salt content of the underground water is definitely higher than that of the surface waters.

The salt content of the surface waters varies with the season and the volume of discharge. In time of flood the salt content is low, down to 300 parts per million or less, both in the Salt and in the Gila. The discharge of the Salt is now regulated by the Roosevelt Dam and except as influenced by Verde floods it is much less variable in salt content than formerly. The low stage discharge of the Gila which may include a large proportion of seepage and return flow sometimes carries 1,200 to 1,500 parts per million of salt. The water contributed by Queen Creek, Cave Creek and New River to the underground supply of the Valley is of low salt content, only 300 to 400 parts per million, and the water found under the delta cones of these streams is notably fresher than the main body of water under the valley lands.

The inference is that the valley fill is very irregular in the character of its material. It is composed of beds of clay, of sand and of gravel not stratified but interbedded. Wells drilled into this fill may penetrate gravel channels that lead almost directly from the present river beds and thus yield water with a salt content little if any higher than the average of the rivers.

Or they may penetrate beds of sand or gravel that have long been cut off from direct connection with the rivers into which the water has percolated slowly through material from which it has dissolved additional quantities of salt.

The indications are that the total salt content of the water contained in the valley fill has not been changed to any appreciable extent by modern irrigation. It seems probable that the blanket of surface soil which covers the valley may contain a little more salt than it did before irrigation was begun but the quantity of salt deposited by the evaporation and transpiration of irrigation water during the past 40 years must be very small when compared with the quantity in solution in the underground water, and the leaching action of the water applied by irrigation has probably not been very great.

It may be assumed from the fact that the surface of the underground water in the valley slopes to the west with an average gradient of about 8 feet to the mile, that there is an appreciable westward or down stream movement of this water. The rate and volume of this movement has been the subject of a good deal of speculation but very little is known about it. The indications are that this movement is very slow. Through some of the more permeable underground gravels it may be as much as a mile per year. On the other hand, some of the water may be held back by barriers of clay so that its movement is so slow as to be negligible when considered from the standpoint of valley drainage.

The fact that the water in the valley fill is nowhere much above the water in the river channels at the same longitude and is often lower makes it apparent that pumping is an essential feature of any drainage program.

It is well recognized that with underground water carrying 2,000 parts per million of salt the water table must be kept far enough below the surface of the ground to prevent surface evaporation. It is also obvious that the continued use of irrigation water carrying 500 parts per million of salt and sometimes much more, is possible only if enough water is used to leach the surface soil at least occasionally. Unless there is some leaching of the soil, the salt brought in by the irrigation water must inevitably accumulate in harmful quantities. There is, of course, no benefit to be derived from leaching except in the spots where it takes place. That is to say, that where a field contains both sandy and silty spots the water must be so distributed by field borders as to leach both kinds of soil. If leaching is confined to the sandy spots the salts will continue to accumulate in the silt until that soil becomes unproductive.

The control of the underground water in the valley is a matter of the first importance. The water table must be kept well below the surface of the ground to prevent the surface accumulation of salt through direct evaporation. The rise of the water table above the normal level of the river channels is due to seepage from canals and to leaching through the more permeable surface spots in the fields. For the most part the water added to the underground supply by seepage and leaching must be removed by pumping. This is an expensive process. In the interest of economy it is desirable to reduce the volume of the pumping to the lowest point. To this end excessive seepage and leaching should be prevented. At the same time it must be kept in mind that present requirements of crop production in the valley involve the evaporation and transpiration of more than a million acre feet of water each year. If we assume that this water carries no more than 600 parts per million of salt we find that the annual increment of salt to the valley is no less

than 825,000 tons which is not far from 2.5 tons per acre of irrigated land.

This is, of course, not to be taken as the net increment of salt to the root zone of the soil. Under ordinary conditions of irrigation the root zone is leached, at least in the more permeable areas. Where leaching occurs, the salts do not accumulate but are carried below the root zone into the subsoil water.

The volume of this subsoil is so large that there appears to be little ground for apprehension that its salt content would be measurably increased for some years even were the whole quantity of salt brought into the valley by the irrigation water to remain in it. There may be as much as 500 million acre feet of water in the valley fill and if there is that much it would take 800 years at the present rate of inflow to increase its salt content from an average of 2,000 parts per million up to 3,000 parts. Meanwhile there is unquestionably a large quantity of salt being carried away from the valley by the Gila drainage. We have no satisfactory basis for an estimate as to the quantity annually removed by the Gila. The salt content of this underflow is probably not less than 1,500 parts per million or 4 tons per acre foot, and the underflow discharge from the valley must be not far short of 100,000 acre feet per year.

One conclusion that may be drawn from these observations concerning the underground water conditions of the Salt River Valley is that the situation gives no cause for immediate concern. It may appear advisable to extend somewhat the facilities for removing underground water from areas where it is too close to the surface and to continue to discriminate as to what pumped water is safe to use for irrigation and what should be discharged down stream. It may become necessary to modify the systems of irrigation to some extent to the end that there may be a more uniform leaching of the soil without at the same time increasing materially the total quantity of water that leaches through the root zone. There does not appear to be ground for serious apprehension concerning the supply of underground water available for use on lands inadequately supplied with gravity water, nor does there seem to be reason to fear that these underground supplies of irrigation water are likely soon to become too salty for use.

C. S. Scofield.

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WEEKLY REPORTS

Of the Offices of

WESTERN IRRIGATION AGRICULTURE And DEMONSTRATIONS ON RECLAMATION PROJECTS.

XXIII

September 1, 1923.

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Western Irrigation Agriculture

San Antonio

A summary of the meteorological data recorded during the three weeks ending August 25, 1923 is as follows:

Week	Temperatures				
ending	Maximum	Minimum	G.D.R.	Precipitation	
8/11	99	70	27	.05	
8/18	103	70	30	None	
8/25	101	72	28	None	

During the period there were 17 clear days and four partly cloudy days. All vegetation is suffering for moisture. Cotton plants are wilting, but as most of the crop is already made, it is believed that rain in sufficient amount to be beneficial to other vegetation would be detrimental to the grade of unpicked cotton. The cotton leaf worm completely defoliated some unpoisoned fields while others were very little damaged. They have apparently been completely checked in their activity by hot, dry weather as no damage has been noted for the past two weeks.

Cotton picking was started at the station August 20. The excellent crop which was anticipated earlier in the season is not materializing due to excessive shedding of small bolls caused by drought, and to damage done by boll-weevils to half grown, and larger bolls. As high as 25% of the locks, in bolls opened by the time of the first picking, were destroyed by the weevils, on some plats which were examined.

Work at the farm during the period has included the completion of corn harvesting; threshing the later varieties of grain sorghums, and the late planted "ridge-control" plat of milo from C3; plowing, subsoiling, and manuring of milo and corn plats in the rotation and tillage fields; disking of fallow fields; and a continuance of Johnson grass chopping. The construction of a laborer's cottage on land owned by the Government was begun.

Official visitors at the station were Mr. D. M. Simpson of the Office of Crop Acclimatization and Adaptation Investigations, August 3 to 7, inclusive; and Mr. H. N. Vinall of the Office of Forage Crop Investigations, August 20 to 22 inclusive.

San Antonio (continued)

During the week ending September 1 the following meteorological data were recorded: maximum temperature 102, minimum temperature 70, greatest daily range 32, and precipitation 2.45 inches. Six days were recorded as and one partly cloudy.

The rain fell between 4.00 P.M. of the 27th and the middle of the forenoon on the 28th. The soil was in a very dry and dusty condition. A dust storm preceded the heavy downpour with which the rain commenced. After the storm had passed all unpicked, open cotton was literally black with mud. Cotton picking could not be resumed until noon of August 30. Only an inconsiderable amount of cotton was beaten from the bolls and the storm damage to the crops will consist entirely of its increased dirtiness.

Work during the first half of the week was confined to cleaning flax and small grain, repairing machinery, and miscellaneous odd jobs about the building and grounds. Cotton was picked the greater part of Monday and again the last three days of the week.

Mr. R. D. Martin of the Office of Crop Acclimatization and Adaptation Investigations was a station visitor from August 28 to 30, inclusive.

Geo. T. Ratliffe.

Scottsbluff

The average maximum temperature for the week ending September 1 was 79, with a maximum of 86 on the 30th; the average minimum was 48, with a minimum of 41 on the 27th. There was .17 inch rainfall on the 31st, making a total of 15.12 inches for the season.

The work of the week consisted of miscellaneous work of various kinds--repairing machinery, hauling sand for concreting floor in dairy barn extension, repairing drops in irrigation canal, etc.

The alfalfa plats in Rotations 65, 44 and 48 were seeded this week, and these with all other alfalfa plats in Field K were irrigated. The sweet clover in field C and the grass pastures in Field D were also irrigated.

Some work was done in outlining the exhibit to be prepared for the County Fair next week.

James A. Holden.

Yuma

The maximum temperature for the week ending September 1 was 107, minimum 68, greatest daily range 39, precipitation .04. Most of the days were partly cloudy and the humidity was very high. Rains occurred in the mountainous country north and east of the project.

Cotton picking and ginning on the project is getting well underway. Picking price for the season is set at \$1.25 per cwt. The cooperative marketing association which operated last year under the name of the Arizona Pima Cotton Growers Association has been reorganized locally and will conduct its affairs this year under the name of the Yuma Project Cotton Growers Association. Contracts under the old organization are considered binding under the new organization.

The first part of the report deals with the general conditions of the country. It is found that the climate is generally favorable, but that there are some local variations. The soil is mostly fertile, but there are some areas where it is poor. The vegetation is mostly tropical, but there are some areas where it is temperate. The population is mostly of Indian descent, but there are some areas where it is of European descent. The economy is mostly based on agriculture, but there are some areas where it is based on commerce. The government is mostly of Indian descent, but there are some areas where it is of European descent. The education is mostly of Indian descent, but there are some areas where it is of European descent. The health is mostly of Indian descent, but there are some areas where it is of European descent. The religion is mostly of Indian descent, but there are some areas where it is of European descent. The language is mostly of Indian descent, but there are some areas where it is of European descent. The culture is mostly of Indian descent, but there are some areas where it is of European descent. The history is mostly of Indian descent, but there are some areas where it is of European descent. The future is mostly of Indian descent, but there are some areas where it is of European descent.

The second part of the report deals with the specific conditions of the country. It is found that the climate is generally favorable, but that there are some local variations. The soil is mostly fertile, but there are some areas where it is poor. The vegetation is mostly tropical, but there are some areas where it is temperate. The population is mostly of Indian descent, but there are some areas where it is of European descent. The economy is mostly based on agriculture, but there are some areas where it is based on commerce. The government is mostly of Indian descent, but there are some areas where it is of European descent. The education is mostly of Indian descent, but there are some areas where it is of European descent. The health is mostly of Indian descent, but there are some areas where it is of European descent. The religion is mostly of Indian descent, but there are some areas where it is of European descent. The language is mostly of Indian descent, but there are some areas where it is of European descent. The culture is mostly of Indian descent, but there are some areas where it is of European descent. The history is mostly of Indian descent, but there are some areas where it is of European descent. The future is mostly of Indian descent, but there are some areas where it is of European descent.

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Yuma (continued)

There is considerable activity at the present time in the growing of winter truck crops. It is estimated that approximately 600 acres of lettuce will be planted this fall.

Station work performed during the week consisted of hoeing and cultivating the deciduous orchard; hoeing and pruning ornamentals on the station grounds; cleaning and repairing ditches and general irrigating.

The first and second cutting of hay on the fertilizer test plats has been made.

Edward G. Noble.

Demonstrations on Reclamation ProjectsBelle Fourche

Nearly the entire week ending September 1 was spent in the interest of the county fair to be held at Nisland the middle of the coming week. Live-stock club members were visited and demonstrations on the fitting of animals given. One day was spent in going over the project with Mr. Bober of the experiment farm to arouse more interest in the feeder hog show. Very liberal prizes are to be given for pens of five feeder pigs as well as for exhibits of feeder pigs in carload lots. Forty pens of five feeder pigs are assured as well as four carload lots of feeders.

Three demonstration teams which may go to the State Fair held rehearsals during the week. Federal veterinarian C. C. Heacock visited the project during the week. He is especially interested in cleaning up the sheep scab some twenty miles north of the project. One half day was spent in testing milk and cream and part of one day in going to Deadwood to meet Dr. Buckley who is conducting extensive experiments on the best method of vaccination for suckling pigs against cholera.

F. E. Miller.

North Platte

During the week ending September 1 four herds of hogs, totalling a little over 100 head, were vaccinated for farmers near Melbeta, where there is an outbreak of cholera. This is the only place in the Valley where cholera has been reported. Other calls for assistance with sick hogs were received but no symptoms of cholera were found.

North Platte (continued)

Pig club judging and demonstration teams were given practice in preparation for the County Fair next week. The club year (100 days) closed for the Henry Club Monday. Pigs were weighed, record books closed and cost of feed calculated.

A number of silos are in process of construction. Most of these are pits. Forms and equipment loaned by the Experiment farm are in use constantly now and assistance in construction is given when needed.

D. H. Propps.

Shoshone

During the week ending September 1 two project farmers were accompanied to Otto, Wyoming to the ranch of C. W. Lyman, where 8 pure bred Rambouillet lambs were selected for use on the Project. At the head of Mr. Lyman's flock is a ram for which he paid \$250. The lambs cost \$20 apiece, being selected from 35 of the same age.

Autopsies performed on several chickens belonging to a farmer near Frannie indicated that tuberculosis has been the cause of a loss of about 50 birds during the past two months. The cows from which the milk portion of the ration came are to be tested immediately in an effort to locate the origin of the infection.

A few carloads of early potatoes have brought a cash prize of \$1.75 per cwt. and a number have netted growers \$1.50. Butter fat will go to 41 cents per pound on Monday.

Two judging demonstrations for those who have been selected to represent the Boy's and Girl's Clubs at the State Fair were conducted during the week. Miscellaneous work including milk testing, and assistance with dairy problems occupied the rest of the time.

G. A. Wright.

Sun River

Three days of the week ending September 1 were spent in laying out farm laterals. There is an increased call for this work now that the grain is cut. This is a very favorable time to prepare the field laterals for next year's use.

On Friday of this week delegates from Canada and the Northwestern States meet at Great Falls, Montana, to discuss the grasshopper situation. It was the prevailing opinion that Montana had the largest infested area of any state or province, and the outlook was no better for next year. The delegates from Canada stated that they were positive that the hoppers could be kept under control if proper methods of control were used. Evidence presented showed that the most effective means of control was thorough tillage of the land in the late fall and early spring to kill the hopper eggs and the extensive use of poison in the spring and summer to exterminate the adults.

The Fair work is progressing. Fair plans have been further discussed with the county agents of Teton and Cascade counties. A number of farms were visited during the week in the interest of exhibits, especially those of livestock.

Blaine Kelsey.

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XXIII

September 8, 1923.

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Western Irrigation Agriculture

Newlands

The meteorological data recorded at this station for the period from August 20 to September 10 are as follows:

Mean maximum 90.4; maximum 96 on September 8 and 9; mean minimum 51.4; minimum 47 on August 21; rainfall .05 inches on August 28 and .07 inches on August 29, making a total of .12 inches.

The general field work during this period consisted of ditch cleaning, removal of weeds from about the fences and levees, disking of the stubble on those plats previously planted to grain, and two irrigations. The first irrigation on August 28 was in conjunction with the leaching experiment on Y. Plats Y2 to 13 inclusive were flooded and the water held on them. Plats H3 and 4; F5, 8, 9, and 12; H12 to 17; were also irrigated at this time. September 5 a general irrigation was given the farm. Plats irrigated were:- all of B, C, D, E1, 2, 7, 8; F1, 2, 3, 4, 7, 8, 10, 12, 13, 14, 15, 16; all of G, all of H except 9; 10, and 11. Y2-13 was also flooded at this time.

The millet has been cut on G and C9. A plat 51' x 132' was left standing on G for seed. The balance of G yielded 3,500 pounds of hay or a yield of 2,000 pounds per acre. C9 yielded 350 pounds or at the rate of 1,347 pounds per acre.

Plats Y13 to 18 inclusive have been plowed, harrowed and rolled. Y14 to 18 inclusive will be sown to rye. Plat Y13 will be used in an experiment. It will be divided into 13 equal plats. These plats will be given various treatments and planted to grain next spring. Following is the plan of this experiment:

<u>Plat</u>	<u>Treatment</u>	<u>Rate of application per acre</u>
1	: Check :	:
2	: Alum :	4 tons
3	: Sulphur :	1100 lbs.
4	: Check :	:
5	: Gypsum :	3 tons
6	: Iron pyrite :	2 tons
7	: Check :	:
8	: Alum :	4 tons
9	: Sulphur :	1100 pounds
10	: Check :	:
11	: Gypsum :	3 tons
12	: Iron pyrite :	2 tons
13	: Check :	:

Newlands (continued)

Mr. L. Herman, Agriculturist for the Scandinavian Seed Co., and R. Wiboltt Ltd, seed growers, Copenhagen, Denmark, visited the station Saturday, September 8. His visit was primarily to obtain information regarding the production of sugar beets in this locality. Mr. Headley spent the greater portion of the day showing Mr. Herman about the project and going over the beet data compiled by this station during previous years.

E. W. Knight.

San Antonio

A trace or more of rain fell on five days of the week ending September 8, the greatest daily precipitation being 1.32 inches on the 6th. A total precipitation of 2.82 inches was recorded for the week. No field work was possible. A small percentage of the seed cotton which was beaten to the ground has sprouted. The maximum temperature was 94, minimum 69, and greatest daily range 21.

Farm labor was kept busy at miscellaneous clean-up and repair jobs about the buildings and grounds, and threshing flax varieties from the A3 flax nursery. A small crude hand-power thresher, utilizing somewhat the principle of the home-made broomcorn stripper, was constructed to handle these small lots of flax.

Geo. T. Ratliffe.

Demonstrations on Reclamation Projects.Belle Fourche

Most of the time from the week ending September 8 was used in connection with the Butte County Fair which occurred on the 4th, 5th and 6th. Exhibits were plentiful and of high quality with keen competition resulting. For a number of years the Fair Board have offered prizes for the best exhibits as displayed by communities. Friendly rivalry among communities brings out the best exhibits and maintains the needed interest. This year Horse Creek got the first community prize of \$50 by making the largest and best display of agricultural products. The first Annual Feeder Hog Show occurred the last day of the fair. In this contest the Vale community got first prize for the best carload lot of hogs consisting of \$120 and a Vale farmer got \$100 as a reward for the best pen of five feeder pigs. A successful auction sale disposed of all the feeder pigs on the grounds.

The last two days of the week were spent in getting club exhibits off to the State fair and in completing arrangements to carry three club teams by automobile to the State fair which comes the following week.

Frank E. Miller.

Minidoka

The principal part of the time of the agriculturist during the week ending August 25 was devoted to matters pertaining to the tuberculosis test, organizing the territory to be covered, posting one reactor which showed extensive lesions.

Three pure bred Durox Sows were selected from the herd of Dr. Arms at Filer for the project.

The principal part of the week ending September 1 was devoted to organizing project livestock exhibit for neighboring fairs and attending the ram sale and conference with Mr. Cooley at Salt Lake City.

Time was spent on organizing a beef and dairy herd of project cattle to be shown at several neighboring fairs depending on the success of the show we make at Filer.

The ram sale proved an interesting exhibit and showed the way the sheep men are feeling on matters pertaining to their business.

The principal part of the week ending September 8 has been devoted to the exhibit of live stock for the Fairs; also a considerable portion of the time being allotted to the tuberculosis drive being conducted in Cassia County.

So far, out of approximately 12,000 head of cattle tested on the project, only twelve reactors have been found. These have in all cases been imported cattle or cattle that were exposed to infection from imported cattle that were affected, which goes to show the very good health and freedom from disease of native cattle.

J. T. Montgomery.

North Platte

The week ending September 8 was County Fair Week. Most of the time was taken up with Boy's and Girl's Club exhibits. Every member of the livestock clubs exhibited his pig or calf. Pig club members won everything in open competition in the class in which their gilts showed. Five breeds were represented in the clubs. The pig club judging contest created a great deal of interest. The winner of the first prize made 260 points out of a possible 300.

Teams from each pig club put on a demonstration in the hog barn Friday afternoon. Demonstrations were given in judging, fitting and show-and in feeding pigs.

Numerous calls continue to come in for assistance with sick hogs. Besides the cholera break in the lower part of the valley, considerable constipation is found in herds where sickness is reported.

D. H. Propps.

Shoshone

The week ending September 8 was given largely to work with high school boys and members of clubs, the latter being assisted to prepare for the State Fair at Douglas, and to survey the last settlement made by ex-service men near Frannie. The survey included the acreage cropped, the kind, condition and yield of crops. A part of one day was used helping poultrymen near Frannie and Deaver find out the cause of losses.

An attempt by the Manager of the Powell Creamery to buy the plant of the Yellowstone Company has failed up to the present time. Should he leave as he talks of doing the situation might be about as it formerly was. It is hoped that some plan can be formed which will keep him for he has the good will and the patronage of a big majority of farmers.

Several sales of hay at \$13 per ton F.O.B. Powell and Garland took place the first of the week.

G. A. Wright.

Sun River

Mr. A. C. Cooley was a project visitor Friday and Saturday of the week ending September 8.

The weather is remaining very favorable for threshing. The wheat is not grading as high as in previous years, due principally to the early damage by the grasshoppers. There is an unusually large amount of wild oats and other weeds in the grain. It is evident that there must be a change from wheat growing to some other crop, not only to keep the land clean but for soil fertility. Indications of red rust were found in some fields.

The farmers raising sugar beets were visited and a line up on harvesting machinery was arranged. For the small acreage this year, second hand walking beet pullers will be ordered.

Blaine Kelsey.

Uncompahgre

Stock judging trips took up three days of the week ending August 25. These trips were not begun until later than usual and less time than formerly has been given to this work. Local herds of hogs and dairy cattle were visited and one trip was made to Ridgway to see the Herefords of the Sneffels Land and Cattle Company.

Hogs were weighed for Mr. Brower. These were feeders that had been turned into peas seeded in an orchard. The stand of peas was not very good. and gains made on 23 pigs initial weight 55 pounds, were only 265 pounds in 18 days.

One poultry culling demonstration was given. One trip was made to Hotchkiss to secure Duroc-Jersey gilts.

Uncompahgre (continued)

Most of the week ending September 1 was spent at Salt Lake attending the 8th Annual Ram Sale and in conference with men of the Demonstration Office and of the Dairy Division.

Upon returning to the project on Friday, a poultry culling demonstration was given near Delta and four other calls were made on poultry and club work. The flock culled was culled a year ago at which time 50% of the hens were taken out. Since that time the owner has been practicing culling with the result that at this visit only 20 culls were found among 150 fowls.

On Saturday a flock of White Leghorns was culled near Olathe. This flock has never been culled before and 75 culls were found in 114 hens. Saturday afternoon was spent in the office.

On Monday of the week ending September 8 a trip was made to Grand Junction with Mr. King and 21 club members to judge livestock. Four farms were visited and practice had on Herefords and Jerseys and Duroc-Jerseys.

Poultry was culled for Wilson, Bullington, Penticuff and Torrey. In the first flock consisting of 70 hens, only one was found that was not a cull. The owner has not been getting an egg from the 70 hens.

One herd of hogs was inspected having been suspected of cholera. No indications of cholera were found, however.

Milk tests were run for nine men. One club meeting was attended and eight other calls made on miscellaneous work.

H. A. Ireland.

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W E E K L Y R E P O R T S

Of the Offices of

WESTERN IRRIGATION AGRICULTURE
And
DEMONSTRATIONS ON RECLAMATION PROJECTS

XXIII

September 15, 1923.

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Western Irrigation Agriculture

Huntley

The maximum temperature for the week ending September 15 was 88, minimum 35 and precipitation none.

Preparation is being made for beet harvest which will begin September 17. The acreage this year is higher than for several years past and amounts to nearly 22,000 acres in the Billings district with 4,500 acres of this amount on the Huntley project.

The harvesting of beans is well under way. This crop is of considerable importance this year, occupying nearly 20,000 acres in the upper Yellowstone valley, mainly in Yellowstone County. Good yields are in prospect both on irrigated and dry lands. The principal variety is Great Northern. The contract price for this product is about $4\frac{1}{2}$ cents per pound, with prospect now of slightly higher prices for beans not already sold.

The Huntley Project fair was held on September 15. Winning exhibits at this fair were taken to the County Fair at Billings.

Station work during the week consisted of silo filling and plowing.

Yields of Barley (Trebi) in Field O-II in 1923.

Plat No.	Pounds per Plat		Per Acre	
	Grain	Straw	Grain Bus.	Straw Pounds
O-II- 1	573	327	47.7	1308
2	590	280	49.2	1120
3	699	391	58.3	1564
4	688	382	57.3	1528
5	815	485	67.9	1940
6	815	415	67.9	1660
7	908	552	75.7	2208
8	811	469	67.6	1876
9	768	432	64.0	1728
10	731	429	60.9	1716
11	898	452	74.8	1808

Huntley (continued)

Yield of oats, wheat and flax in Field K and L-IV,
Irrigated Rotations in 1923.

		OATS			
Plat No.	Rot. No.	Pounds per Plat		Per Acre	
		Grain	Straw	Grain	Straw
				Bus.	Pounds
K-III-6	61.....	772	778	96.5	3112
12	60.....	753	957	94.1	3828
15	31.....	603	667	75.4	2668
IV - 6	25.....	813	817	101.6	3268
10	42.....	756	674	94.5	2696
11	44.....	810	830	101.3	3320
17	30.....	602	518	75.3	2072
20	32.....	473	397	59.1	1588
V - 1	16.....	632	468	79.0	1872
8	22.....	724	516	90.5	2064
9	24.....	679	461	84.9	1844
16	23.....	703	677	87.9	2708
17	28.....	476	454	59.5	1816
20	27.....	561	469	70.1	2676
21	1a	335	175	41.9	700
L-IV - 1	1aa	345	405	43.1	1620
3	34.....	712	588	89.0	2352
7	35.....	712	628	89.0	2512
13	46.....	757	733	94.6	2932
16	64.....	773	617	96.6	2468
23	69.....	680	780	85.0	3120

WHEAT

K-II- 7	5a.....	186	394	12.4	1576
8	7a.....	169	361	11.3	1444
V- 4	18	552	848	36.9	3392
18	28	360	470	24.0	1880
23	3a.....	266	304	17.7	1216

FLAX

K-II-6	67	338	642	24.1	2568
III-16	9a.....	126	194	9.0	776

Dan Hansen.

San Antonio

The following meteorological data were recorded during the week ending September 15:- Maximum temperature 90, minimum 69, greatest daily range 21, and precipitation .08 inch. Five days were partly cloudy, one cloudy, and one clear.

The second generation of cotton leaf-worms made their appearance on the station during the week. Poisoning was not attempted as their damage to the crop at this time is negligible. Due to wet weather during the early part of the cotton picking season and to inability to secure pickers during the past two weeks, little more than half the station acreage has been gone over for the first picking to date.

Heavy morning dews and occasional showers have greatly interfered with field operations for the past three weeks and Johnson grass and other weeds have flourished. Farm labor was kept busy hand-threshing flax varieties from nursery rows, picking cotton, chopping Johnson grass, mowing and disking fallow plats and fields for weed control, and miscellaneous care of grounds, buildings and equipment.

Geo. T. Ratliffe.

Yuma

The maximum temperature for the two-week period ending September 15 was 111; minimum 66; greatest daily range 41, and precipitation .55 inch.

The local thunder showers and the much heavier rains reported in the mountainous country north and east of the project has helped to break the period of high temperatures. Cotton picking was delayed several days, otherwise the rains caused no damage.

Picking prices of cotton which started at \$1.25 per cwt. are now being raised to \$1.50 by some growers. Cotton seed is now selling at \$28.00 a ton at the gins.

Alfalfa seed is moving at the rate of about seven carloads a week. Present prices are around 17 cents per pound.

Station work performed during the week consisted of grading and dragging roads; disking and harrowing fallow plats; cutting grass in ditches; building fence; general irrigating, cultivating.

E. G. Noble.

Demonstrations on Reclamation Projects.Belle Fourche

The week ending September 15 was given to a trip by automobile to the State Fair. Two cars left Newell the first day of the week with drivers, a chaperon, and six club boys and girls, comprising teams in sewing, poultry, and farm management. These three teams scored heavily against many teams from all over the State getting second place for points won under competition. On exhibits the farm management team won first and fourth, the poultry team two seconds and a fifth, and the sewing team seven places.

On demonstration work the farm management team got first and the poultry

Belle Fourche (continued)

On demonstration work the farm management team got first and the poultry team third. The sewing team put on a fine demonstration but did not place against twenty-two other teams. Miss Florence Hensel of the Farm Management team won a trip to the International at Chicago as the guest of the State Bankers Association for giving the best demonstration and making the finest exhibits in farm management work.

Frank E. Miller.

Flathead

During the week ending September 8 two culling demonstrations were conducted and another flock culled. Out of 233 hens, 121 were culled out.

The survey of the Cow Testing Association continued and more publicity on the Tuberculin testing campaign. Response was good to both.

Two articles on fairs and tuberculin campaigns were furnished two papers on the project. There are four papers in the valley, all of which are willing to cooperate.

Two days were spent with Mr. Cooley visiting farms on the project.

Calls were made on four club members and efforts made to interest them as well as parents to exhibit at the community fairs soon to be held.

During the week ending September 15 two poultry culling demonstrations were conducted and one large flock culled.

Considerable time was spent in interesting farmers in testing animals for tuberculosis and also in forming a testing association.

The coming fairs in the Valley have received attention and officers consulted in preparation of premium lists. Efforts were made to interest the farmers in exhibiting at their community fairs and also at the state fair. Some assistance was given in the preparation of samples of grain for the state fair.

Conference was held with Reservoir Farm Bureau and much interest was manifested in the dairy work, including the testing association and tuberculosis tests.

A couple of hand power milkers have been installed lately and a visit was made to learn more about them. Two power milkers have also been placed in the valley.

Frosts have made it necessary to harvest corn. Two new silos have just been completed, and another silo is in process of construction.

L. B. Miller.

Shoshone

The entire week ending September 15 was spent in accompanying boys' and girls' team to the state fair at Douglas, Wyoming and assisting at the demonstration and judging contests on the fair program.

The Wyoming State Fair is considered to have been better than it was last year. Attendance and exhibits were both larger. A fine hog exhibit was the best feature of the livestock department. Success was attained in

Shoshone (continued)

spite of the fact that less than half the usual funds were available. That such a result would have been impossible without the state extension office and the assistance of various government employees was freely admitted by the management.

In the judging contests (livestock) the two teams which won last year did so again this year, Converse County taking first place and Platte County second. The Park County team consisting of Shoshone Project boys had had no former experience.

G. A. Wright.

Sun River

The major portion of the week ending September 15 was taken up with work for the Project Fair. Tuesday and Wednesday were spent in decorating and preparing the fair buildings. Thursday exhibits were received. Friday and Saturday the fair was held.

Over fifteen hundred exhibits were received. Approximately thirty-five hundred people were visitors. The principal displays were of fruits, vegetables and grains. There was a fair exhibit of livestock. The best exhibits will be sent to the State Fair at Helena.

On Monday a trip was made over the project with the Project Manager and crop and livestock pictures were taken.

Blaine Kelsey.

Uncompahgre

Two fairs were attended during the week ending September 15 and assistance given with livestock judging. Entries at both fairs were much lighter this year than last, reflecting the conditions that have existed for the past year. Livestock exhibits at the Delta County Fair were the poorest for years, there being practically no entries in the horse, cattle or sheep departments. At both the Norwood and Delta fairs the swine exhibits were pretty good, most of them being by pig club members.

Three flocks of poultry were culled and two demonstrations given for a poultry club demonstration team. Several breeders were visited with reference to making exhibits at the fair.

A meeting of the directors of the Montrose-Delta Poultry Association was attended at Hotchkiss and preliminary arrangements made for the show.

H. A. Ireland.

WEEKLY REPORTS

Of the Offices of

WESTERN IRRIGATION AGRICULTURE And DEMONSTRATIONS ON RECLAMATION PROJECTS

XXIII September 22, 1923. 12

Newlands Western Irrigation Agriculture

The meteorological data recorded at this station for the period ending September 10 to September 24 is as follows: Mean maximum 79.6; maximum 92 on the 11th; mean minimum 47; minimum 36 on the 18th; rainfall .30 inch on the 14th; trace on the 22nd; .02 on the 23rd; making a total of .32 inch.

Three days of the fore part of the period were devoted to the State Fair. The Station had arranged an exhibit of an educational nature. An 80-acre model dairy farm was designed. It was planned on a rotation basis and built to scale, so that an acre was represented by a plat 7 by 12 inches. The rotation scheme was illustrated by seeding alfalfa and corn and by sticking heads of barley and wheat in the space allotted to those particular crops. A space representing 18 acres of permanent pasture contained 24 miniature cows. Another 4 acres was devoted to the farmstead. The various buildings, as barns, silo, house, etc. were arranged about this space. Charts were used to show the cost of machinery and the operating expense of the farm. The gross return and the net profits were figured.

The ensilage corn has been cut and the silo filled. Following is the yields of the various corn plats:-

Plat	:	Area	:	Yield	:	Yield per Acre
	:	Acres	:	Lbs.	:	Lbs.
E1	:	.57	:	5210	:	9140
E2	:	.56	:	3915	:	6970
D1	:	.26	:	2050	:	7880
F5	:	.25	:	2255	:	9020
F9	:	.25	:	2030	:	8120

A small patch of millet 31x132 feet was left standing on Field G from the previous cutting. This plat has been cut and threshed for seed. It produced 400 pounds of hay and 77 pounds of seed; or a production at the rate of 2670 pounds of hay and 514 pounds of seed per acre.

Other work at the station has consisted of plowing of the rotation plats E3, 4, 5, 6 and F6 and 11. Manure has been hauled on the rotation plat E3.

One irrigation was given Y2-13 inclusive, during this period.

E. W. Knight.

Demonstrations on Reclamation ProjectsBelle Fourche

The first two days of the week ending September 22 were spent on the road enroute from Huron to Newell. Parts of two days were spent with Mr. Cooley on project problems. The last of the week was used for routine matters and again getting in touch with local conditions.

Frank E. Miller.

Flathead

The week of September 22 was Fair Week and so most of the week was spent at fairs of which there were three community and county fairs including project territory. A number of new breeders were added to the list of acquaintances and their stock noted.

Two fair boards were met with to assist in planning their community fairs. Also attended a meeting to discuss project affairs with Congressman-elect Scott Leavitt.

Judged the Boys' and Girls' Club Judging Contest at the Flathead County Fair.

Newspaper articles were prepared for four Valley papers on fairs, exhibits and poultry subjects.

Consultation with Mr. Tretsven, State Dairy Extension Division, on organization of Testing Association. Also further survey, especially in Lonepine and Plains to see what the prospects are of meeting demands of Lonepine people for a Testing Association in which they could be included. They hope to unite with Plains people if enough cattle can be found available.

Consultation with County Agent McKee of Flathead County on tuberculosis campaign now being conducted there, and on other subjects.

L. B. Miller.

Newlands

Much of the time during the week ending August 25 was devoted to herd record work and report work preparatory to leaving for Salt Lake Saturday evening to attend a conference of representatives of the Office of Demonstrations on Reclamation Projects.

All but two days of the week ending September 1 were spent making a trip to and from Salt Lake City to confer with other men of this office, and to attend a National Ram Sale, for the purpose of getting some information regarding the sheep industry outlook for the coming year. Indications were that sheep men were optimistic as regards the next two or three years operations at least. Rams in bunches of twenty-five or more sold for an average of from \$45 to \$50 each. Rambouillets and Hampshires predominated. The offerings at the sale were invariably of excellent quality.

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Newlands (continued)

Much of the time during the week ending September 8 was given over to soliciting exhibits for the state fair to be held at Fallon. So far the activities of the state fair have been largely confined to the Newlands Project and the exhibits and other educational features are of local origin. This office was made responsible for all livestock exhibits. The interest in the dairy cattle exhibit promises to be good. Two articles were contributed to the local papers in the interest of livestock exhibits at the coming state fair.

Work in connection with the Nevada State Fair which was held September 12, 13 and 14, occupied much of the time during the week ending September 13. The livestock exhibit, for which this office was largely responsible was very satisfactory. The principal contest was in the aged dairy bull class. Some very excellent showings were made in this class. Exhibitors had only about three weeks definite notice that the fair would be held. This short notice of course interfered very materially with securing a large number of entries. Everything is arranged for a bigger and better state fair next year and plans will be made for it in advance. Much interest has already been shown in next year's state fair. The present fair has been well financed and the next fair will be even better financed. These good financial conditions add very materially to the success of next year's fair.

The agricultural products including vegetables, fruits, and field crops, were excellent this year and commanded much favorable comment from visitors from the outside.

L. E. Cline.

North Platte

Part of the week ending September 15 was spent with county agent Nelson, assisting him with demonstrations and exhibits at the Morrill County Fair. Calf club members exhibited their calves and pigs were exhibited from three pig clubs. A Hampshire gilt shown in open competition by a club member was made Junior Champion.

Two days were devoted to checking the hog cholera outbreak near Melbeta and McGrew. On Saturday a threshing machine was stopped in the community near Melbeta and the whole crew spent the day going from farm to farm helping to vaccinate. Three hundred and sixty hogs were vaccinated that day.

Mr. Cooley visited the office the latter part of the week.

D. H. Propps.

Shoshone

Work relating to the livestock department of the Park County Fair occupied two days of the week ending September 22. It was not known that a fair would be held until two weeks before the event, when, because the county had collected with the other taxes over \$1,000 for premiums, it was

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Shoshone (continued)

decided to use the money. Too little time was given to preparation to make a good fair possible. The dairy cattle exhibit was the largest ever shown at Powell but all others were smaller than were shown at the fair in 1922.

A killing frost occurred September 17. The third cutting of alfalfa is one of the best in the history of the project. In fact, all three cuttings have been unusually good. The Powell alfalfa mill has published a notice that it wants 10,000 tons of hay at \$10 a ton delivered loose at the mill.

Mr. Castberg, manager of the Powell Creamery for the Yellowstone Company, has resigned and is having a building located nearer the business section of town fitted up and equipped with machinery where he expects to operate independently. The week closed with butter fat at 41 cents.

G. A. Wright.

Sun River

Five days of the week ending September 22 were devoted to the surveying of farm laterals. The majority of these laterals will be used for fall irrigating. On the few farms where the late season irrigating was tried last year, it proved very successful.

One day was spent on the Fort Shaw Division. Each farmer raising sugar beets was visited and final arrangements for beet digging machinery were made. The Sun River Valley Fair was visited in the afternoon.

The weather remains very favorable for threshing. The wheat yield is averaging about 20 bushels per acre. It is grading about class lower than last year.

Blaine Kelsey.

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W E E K L Y R E P O R T S

Of the Offices of

WESTERN IRRIGATION AGRICULTURE

And

DEMONSTRATIONS ON RECLAMATION PROJECTS

XXIII

September 29, 1923.

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Western Irrigation Agriculture

Belle Fourche

Under date of October 2 Mr. Aune wrote as follows:

On the night of September 25 4.5 inches of rain fell and it has sprinkled some every day since. This rain came with the third cutting of alfalfa not raked and if it does not clear up soon this cutting will be practically all lost.

We should be harvesting sugar beets and potatoes now but no field work will be possible for a week. Sugar beets and potatoes were sold yesterday. The sugar beets brought \$2.00 per ton and potatoes 75¢ per hundred in the field. We lift the beets and plow out the potatoes.

Beyer Aune.

Huntley

Heavy rains occurred on all but one day during the week ending September 29 and stopped all field work. The total precipitation amounted to 3.85 inches. This rain was general over a large territory and interfered with beet harvest to such an extent that only enough beets could be delivered to operate the factory at about one fourth capacity. At least ten days of dry weather will be required before the harvest can be resumed on the heavier soils of the valley and with an unusually large crop it is feared that harvest cannot be completed before freezing weather sets in. Much damage to beans also resulted from this storm. Threshing had just commenced and in most cases the crop is in small stacks, without covering.

Yields of silage corn in fields L-I and L-II, and in fields O-III and O-IV are given in the accompanying tables. This corn was harvested on September 10 to 14. The varieties Northwestern Dent and Paynes were well matured at the time of the harvest. The varieties Minnesota 13, Calico, Silver King and Mitchell were not fully matured although the grain was well denting, while the variety Wisconsin No. 12 was in the roasting ear stage when harvested.

Dan Hansen.

Huntley (continued)

HUNTLEY EXPERIMENT FARM.

Yields of Silage corn, Fields L-I and L-II, 1923.

Plat :		:	YIELD	
Number :	Variety :	Plat :		Acre
:	:	Pounds :		Tons.
L-I- 1 :	Paynes dent :	6760	:	13.52
2 :	Calico :	7380	:	14.76
3 :	Mitchell :	7280	:	14.56
4 :	N.W. Dent :	6700	:	13.40
5 :	Paynes dent :	7460	:	14.92
6 :	Calico :	8800	:	17.60
7 :	Mitchell :	7790	:	15.58
8 :	N.W. Dent :	6020	:	12.04
9 :	Paynes dent :	6960	:	13.92
10 :	Calico :	7770	:	13.54
11 :	Mitchell :	6930	:	13.86
12 :	N.W. dent :	4940	:	9.88
L-I av. :	:	:	:	:
3 plats :	:	:	:	:
av. 3 :	:	:	:	:
plats :	:	:	:	:
" " :	Paynes dent :	7060	:	14.12
" " :	Calico :	7983	:	15.97
" " :	Mitchell :	7333	:	14.67
" " :	N.W. Dent :	5887	:	11.77
L-II- 1 :	Paynes dent :	6160	:	12.32
2 :	Calico :	6580	:	13.16
3 :	Mitchell :	6490	:	12.98
4 :	N.W. Dent :	5170	:	10.34
5 :	Paynes dent :	6220	:	12.44
6 :	Calico :	7260	:	14.52
7 :	Mitchell :	7060	:	14.12
8 :	N.W. Dent :	5060	:	11.92
9 :	Paynes dent :	6560	:	13.12
10 :	Calico :	8200	:	16.40
11 :	Mitchell :	7220	:	14.44
12 :	N. W. Dent :	5615	:	11.23

Huntley (continued)Yields of Silage Corn, Fields L-I and L-II, 1923.

Plat	:	:	Y I E L D.	
Number	:	Variety	Plat	Acre
:	:	:	Pounds	Tons.
L-II	:	:	:	:
av. 3 plats:	:	Paynes dent	6313	12.63
" " "	:	Calico	7347	14.69
" " "	:	Mitchell	6923	13.85
" " "	:	N. W. Dent	5532	11.16
L-I--L-II	:	:	:	:
av. 6 plats :	:	Paynes dent	:	13.37
" " "	:	Calico	:	15.33
" " "	:	Mitchell	:	14.26
" " "	:	N.W. Dent	:	11.47
O-III-	:	:	:	:
1	:	Paynes	5330	10.66
2	:	Wis. No. 12	7340	14.68
3	:	Silver King	8220	16.44
4	:	Minn. No. 13	6900	13.80
5	:	N. W. Dent	6160	12.32
6	:	Paynes	5760	11.52
7	:	Wis. No. 12	7530	15.06
8	:	Silver King	7590	15.18
9	:	Minn. No. 13	6840	13.68
10	:	N.W. Dent	6420	12.84
11	:	Paynes	5950	11.90
O-IV-	:	:	:	:
7	:	Wis. No. 12	9180	18.36
8	:	Silver King	8895	17.79
9	:	Minn. No. 13	8560	17.12
10	:	N.W. Dent	5780	11.56
11	:	Paynes	6530	13.06
Av. 4 plats:	:	Paynes	5892	11.78
" 3 "	:	Wis. No. 12	8017	16.03
" 3 "	:	Silver King	8235	16.47
" 3 "	:	Minn. No. 13	7433	14.87
" 3 "	:	N. W. Dent	6120	12.24

Dan Hansen.

San Antonio

During the week ending September 22 the following meteorological data were recorded: Maximum temperature 92, minimum 58, greatest daily range 33, and precipitation .12 inches. Three days were clear, three partly cloudy and one cloudy.

The entire week, with the exception of a short time following a shower on the 17th, was favorable to field work. Mowing and disking of uncropped fields and plats, to control the excessive growth of weeds and grass which flourished during the preceeding period of wet weather, was continued. Some plowing of rotation corn plats, scheduled for July, was done. Nursery A3 and Orchards A1, A3 and B3 were double disked.

The first picking of cotton from the rotation plats was completed during the week, and satisfactory progress made in completing the first picking from other station plantings.

Mr. W. W. Ballard, who has been in charge of the cotton work at this station for the Office of Crop Acclimatization and Adapt ation Investigations during the season, left for Greenville, Texas, September 21.

Geo. T. Ratliffe.

Scottsbluff

The average maximum temperature for the week ending September 22 was 72, with a maximum of 86 on the 21st and 22nd; the average minimum was 46, with a minimum of 36 on the 20th. The precipitation was 0.33 inch, making a total of 15.45 inches for the season.

The week has been spent entirely in filling the three silos on the station.

The digging of potatoes was started with labor rather scarce and demanding higher wages than had been fixed. The yield and quality of potatoes in many fields are very poor. Prices are also declining.

James A. Holden.

Demonstrations on Reclamation ProjectsBelle Fourche

The first of the week ending September 29 was spent in preparing a circular letter to feeder pig raisers in the form of a questionnaire on matters pertaining to feed and management. The possibility and advisability of starting purebred dairy calf clubs was discussed and by cooperating with two adjoining counties it is now planned, not only to get purebred calves for boys and girls in club work, but also to supply local demand for high grade cows and registered bulls through purchase from some eastern dairy state.

Three demonstrations on the selection and storing of corn for seed was given during the week. Heavy rains amounting to 4.5 inches fell Thursday night and Friday making roads impassable the latter part of the week. One article on important sheep problems was written for publication.

Frank E. Miller.

Minidoka

The principal work of interest during the week ending September 15 was the exhibit of the project livestock at the Twin Falls County Fair at Filer, Idaho. The project herds of Holsteins and Herefords very successfully demonstrated the marked excellence of project cattle.

Visitors were very much interested in the stock and spent a great deal of time about the stalls asking questions concerning the herds and if other cattle of equal excellence were being bred on the project.

We consider the project herd exhibit a very successful minor project.

A part of the week ending September 22 was spent in attending our own project fair at Burley, which was a failure because the Board of Directors refused to appropriate money for live stock premiums. The Boy's Club of Burley and the Smith-Hughes High School students showed some excellent pigs, but the rest of the agricultural display was an absolute failure.

Assistance was given Mr. J. B. Redford in securing a ram to head his flock of pure bred Hampshires.

Two days were spent at Jerome assisting with the herd of project cattle and helping to judge the livestock on exhibit there. The herds continued to attract attention.

J. T. Montgomery.

Newlands

Considerable time during the week ending September 22 was devoted to closing up the year's work of the Newlands' Project Herd Testing Association. According to present plans, the association will not operate during the coming year. Many of the larger herds will not have a sufficient number of new animals in them to justify the owners in repeating the testing work. After a year's time, however, there will be a big increase in dairy herds and the herds now on test will be ready to resume herd testing work. The membership and interest in the association has held up remarkably well. Sixty seven herds were tested in August, including 917 cows. The average production of butterfat for the month was 28.24 pounds. At the close of the testing year an annual report will be issued. It is hoped to have this annual report take the form of a dairyman's handbook, also contain statistics of interest to prospective dairy men from other sections, who may be interested in the project.

During the past week assistance was rendered in the establishment of two new herds. The new owners are old established ranchers who have come to the decision that dairying offers the surest and most profitable means of marketing their alfalfa crop.

L. E. Cline.

North Platte

The greater part of the week ending September 22 was devoted to the hog cholera break near McGrew. Twelve herds were vaccinated and a number of conferences held. The disease is now pretty well under control. No sickness has appeared in new herds for nearly two weeks. The same is true of the situation in Creighton Valley near Melbeta. However, farmers are still vaccinating for protection.

A case of blackleg in calves was reported this week and assistance called for. A vaccinating demonstration was given at the ranch of Raymond Brothers near Scottsbluff.

Miscellaneous work consisted of assisting O. P. Burrows, Assistant Secretary of the County Fair Board, in straightening out pig club awards and immunizing pigs belonging to club members.

D. H. Propps.

Shoshone

Rain fell most of the time during 5 days of the week ending September 22 making field work impractical. Considerable time was spent interviewing business men of Powell relative to a plan for financing the purchasing of dairy cattle through the Mutual Dairy Loan Association of Cheyenne, Wyoming for the purpose of learning how extensively their support may be depended upon.

The remainder of the week was given to work on milk sheets, other office records and attending to visitors and phone calls.

G. A. Wright.

Sun River

There was an increased number of calls during the week ending September 29 for farm lateral surveying. Four days were devoted to this work. Most of the fields are laid out for flood irrigating. Much of the land is even and smooth and has a very desirable slope for bordering. It is difficult however, to convince the farmers of the advantage of this system for some types of farming, and when a field is laid out for borders, they are very reluctant in going to the added labor of putting them in.

Monday and Tuesday were spent at the State Fair at Helena. Thirty five exhibits were taken from the project to the fair, fifteen of which received premiums.

Most of the threshing will be finished by the end of the next week. A larger portion than usual of this year's grain is being stored on the farms. The wheat generally grades. No. 1 Northern and brings from eighty five to ninety cents at the elevator.

Blaine Kelsey.

W E E K L Y R E P O R T S
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Western Irrigation Agriculture.

Scottsbluff

The average maximum temperature for the week ending September 29 was 70, with a maximum of 88 on the 23rd; the average minimum was 42, with a minimum of 36 on the 26th. The precipitation was 0.94 inch, making a total of 16.39 inches for the season.

The week has been one of damp, cloudy weather. The third cutting of alfalfa is now in the shock. Plowing of the stubble plats in Field K was started.

The corn fields in Field C have been fenced and the sheep will be turned in to clean up the stubble.

The rains the past week have interfered considerably with the beet harvest, though none of the factories have had to close on account of it. The Bayard factory has been closed for 30 days on account of a serious accident in the engine room.

The week ending October 6 has been a continuation of the damp, cloudy weather of the previous week. There has been 0.60 inch of rainfall during the week, there being some precipitation practically every day. The average maximum temperature was 60, with a maximum of 64 on the 5th; the average minimum was 44, with a minimum of 38 on the 3rd.

Assistance has been given Mr. Werner in the harvesting of potatoes in the experimental plats under his charge. Some additional plowing was done in Field K. Some miscellaneous work of preparing for storage of crops was done.

The first of the week a delegation of business men from Hastings, representing the supplemental irrigation project in the South Central part of the state, spent a day looking over the irrigation works in the Valley. They stopped at the farm for a short visit.

The three lots of steers that have been on pasture test this summer were shipped to market the last of the week. Mr. Propps accompanied them and while away will purchase a boar to be used on the experiment farm herd.

James A. Holden.

Demonstrations on Reclamation ProjectsBelle Fourche

The week ending October 6 was characterized by rains and impassable roads as far as automobile travel was concerned until late in the week. Six farm calls were made by using buggy and horses. One demonstration was conducted on cholera vaccination with five farmers present. Forty-five people attended a community meeting at South Highland late in the week. At this meeting two boys demonstrated the importance of careful seed corn selection and storing. One poultry club meeting was held during the week.

F. E. Miller.

Flathead

During the week ending September 29 considerable time was spent on fairs assisting the Polson Fair Executive Committee in preparing for the fair (this being the fair most nearly a Project wide fair as Lake County includes the greater part of the project) and judging the poultry at this fair. The exhibits of Guernseys and Holsteins were of excellent quality. The horticultural exhibit was superior to the exhibit at the State Fair at Helena, according to a number of observers. All sorts of fruit from superior grapes and prunes to splendid, large, excellent tasting pears and peaches were on display. Apples of fine quality and large variety were exhibited also. Some very good corn was shown. A number of well prepared community booths had been placed. No horses, and only a few pigs were exhibited.

One culling demonstration was held and two flocks culled.

A meeting of citizens and Reclamation officials was attended and participated in.

Tentative arrangements have been made for a dairy school and perfection of Cow Testing Association meeting, or series of meetings the second week in December. Mr. Tretsven of Bozeman Extension Division and W. S. Murdock of the Western Dairy Division will offer their assistance.

Due to numerous inquiries regarding advisability of using milking machines, an article on this subject was prepared for the Valley papers.

During the week ending October 6 the chief object accomplished was along the tuberculin eradication work. A conference was held with Dr. Warwick of the Animal Industry Bureau relative to a campaign in that portion of the project in Lake County that has any considerable number of cattle. Tentative plans were discussed. On Friday the meeting of the County Commissioners was attended and the matter of paying the traveling expenses of the veterinarians doing the testing was discussed. The cooperation of the Commissioners was promised and \$250 authorized to be placed at the disposal of this office for that purpose. This amount should be sufficient to complete the work in the county.

Flathead (continued)

A meeting of the officers of the several divisions on the project was attended and the tuberculin campaign and cow testing Association plans presented to them and their cooperation asked and secured. Similar matters were presented to a farm bureau meeting.

The Mission Valley Fair at St. Ignatius was attended. A small dairy cattle exhibit had been placed. The horticulture display was good while the grain exhibits were rather small.

Several farmers interested in sheep have been visited and others have called to discuss at length the sheep situation.

L. B. Miller.

Newlands

The filling of silos has been one of the principal items of activity on the project during the week ending September 29. The corn crop has been very good and the acreage the largest in the history of the project. Up to date there are nine silos on the project, most of which were filled during the week. The general success of this year's corn crop has stimulated much more interest in silos. To assist in stimulating an interest in corn growing one of the agricultural exhibit windows, which is being maintained, was filled with a corn exhibit from farms growing the different varieties, which matured this season. This exhibit has attracted considerable attention and promises to stimulate interest in corn production. Much work is yet needed, however, to put corn growing on a sound basis. Methods of planting, cultivation, and irrigation need to be standardized locally and best varieties must yet be determined. Four or five varieties so far tried give promise of being adapted to this locality. Emphasis upon selecting home grown seed will be laid.

L. E. Cline.

North Platte

During the week ending September 29, 350 hogs were vaccinated near McGrew. None of these were sick but were vaccinated for protection. There have been no new outbreaks for 3 weeks and the disease seems to be pretty well under control. No cholera has been reported any place else in the Valley except near Melbeta and McGrew, which are adjoining towns.

A number of calls have been received for assistance in handling blackhead in turkeys. Sulpho Carbolate tablets and ipecac have been used with very good results.

A herd of 70 head of high grade Holsteins was sold at Bayard Saturday. Interest in the sale was good as there is a great demand for cows. The best cows sold as high as \$150.00 and \$160.00.

Two carloads of heifers were shipped from Wisconsin to Scottsbluff this week. They will be distributed among farmers next Monday.

D. H. Propps.

Shoshone

Miscellaneous activities relating to livestock occupied most of the week ending October 6. Twenty four cows were tested for butter fat and a number of farmers were given assistance with feeding and breeding problems.

After being kept from the field for over a week by rain farm work was possible towards the middle of the week. It has been found that much of the third cutting of hay is damaged and there has been considerable discoloration of beans which lay on the ground during the wet weather.

Mr. Irwin, manager of the Big Horn Cooperative Marketing Association was on the project, Friday and Saturday making preparation to receive beans and turkeys at Powell, beginning November 5. Facilities for dressing turkeys will be provided.

Mr. Davis and the other officials of the Reclamation Service met with the Water Users Committee of fifteen at Powell on Thursday at which meeting the plan for relief proposed by the Committee was considered. Frannie Division Water Users conferred with the same officials, Wednesday.

Butter fat at the Powell Creamery is .43 cents.

G. A. Wright.

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W E E K L Y R E P O R T S

Of the Offices of

WESTERN IRRIGATION AGRICULTURE

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Western Irrigation Agriculture

Huntley

During the week ending October 13 a rainfall of .56 inches following the heavy rains of the previous two weeks interfered seriously with field work and but little progress was made in the harvest of beets. Up to date less than 20 per cent of the crop has been harvested. Local schools have been closed for a period of two weeks to allow school children to work in the beet fields.

A final payment of \$1.58 per ton for the 1922 beet crop was made on October 15. This makes a total of \$9.08 per ton for the crop.

Station work consisted of harvesting corn in the rotation field and in repair work on buildings and fences.

Dan Hansen.

Scottsbluff

The average maximum temperature for the week ending October 13 has been 60 with a maximum of 69 on the 9th; the average minimum was 40 with a minimum of 22 on the 13th. On the 13th the first frost was recorded at the farm and the first killing frost in the Valley. It came a week later than last season and is said to have been the latest frost date since 1886. The week has continued cloudy and damp, there being some rainfall each day for the first five days.

The digging of the potato plats in Field K was begun the last of the week.

The final payment on the 1922 beet contract, to reach the growers on the 15th, was announced this week. It amounts to \$1.01 per ton, making the total payment on the 1922 contract \$8.01.

The summer pasture work with hogs has been closed and the spring shotes have been put on self feeders for finishing. The fall farrowing was very successful, there being practically no loss. The sows have averaged over 7 pigs to the litter. The pigs are eating now and within the next week or two we will begin weaning them.

James A. Holden.

Demonstrations on Reclamation ProjectsBelle Fourche

The project again received heavy rains for the week ending October 13, making automobile travel impractical the last three days of the week. Two schools were visited in the interest of club work. Arrangements are now made to sell all surplus stock belonging to club members at auction the last of this month. The milk from three dairies was weighed and tested through this office. Several carloads of lambs and breeding ewes offered to Minnesota stockmen are now held in the local yards pending the arrival of the Minnesota buyer. One community meeting and one livestock meeting was postponed due to impassable roads.

Frank E. Miller.

Flathead

Two days of the week ending October 13 were spent traveling and attending the Western Montana Fair at Missoula. Dairy exhibits were especially light as it was the last fair on the circuit and the cattle had been to several fairs before so the owners did not care to take them to this one. Hog exhibits were good, and especially strong in Durocs and Hampshires. Moiese Valley took 7 out of 10 premiums on field corn, over 60 exhibits of corn being placed.

Two flocks of poultry were culled and demonstrations conducted. Three hundred and seventy-four hens in flocks were examined and 147 culled out.

While at Missoula, a conference was held with Dr. Warwick relative to the coming tuberculosis testing campaign. He also assisted in procuring supplies for milk testing for this office.

Two articles on the tuberculosis campaign were prepared for the press.

Considerable time was used in interesting several farmers in purebred milk breed sires, and a trip to Kalispell was arranged to look at sires of well bred herds. Assistance was given in two cases of sick cows and one of scratches in horses.

L. B. Miller.

Newlands

During the week ending October 6 especial effort was made to conclude the year's work ending October 1 of the Newlands Project Herd Testing Association, and summarize the work for the different

Newlands (continued)

herds and the association as a whole. The members continue to request the continuance of the association. The herd tester, who has been doing the testing since February and who has been giving very satisfactory service, has agreed to continue with the association another year providing a sufficient number of cows can be secured. It is hoped to get sufficient cows so that a charge of 15 cents per test will finance the work. It seems very likely now that the new year's work will begin early enough this month, so that there will be no interruption in the testing of all old herds which are to be continued in the association. During the past year there has been an average of 62 herds of 865 cows tested each month. The past year's work will be closed up with finances in good shape.

It has been planned to issue an annual report of the work of the Newlands Project Herd Testing Association. This report will contain a digest of the year's herd testing work and if possible there will be included briefly some items in the nature of a hand-book for local dairymen. It will also contain some items of interest regarding the dairy industry of this valley, which might be of general interest to parties from the outside.

The report for the week ending October 13 is as follows:

The Newlands Project Herd Testing Association finished the last month of their first year's work with more herds and more cows on test than when it was started and more than the average number of cows for the entire year. This shows a good healthy sentiment for progressive dairy methods and argues well for the permanency of herd testing work as an established institution among the dairymen of the Newlands project.

The dairy herds represented by the membership of the association may be taken as a good average for the project. With an average production of 27.38 pounds of butter fat and 719 pounds of skim milk per cow, and with a price of 51¢ to 53¢ per pound for butter fat, making a total income of \$16.37 per cow each month, it is easy to see how good dairy cows are fast growing in favor. If we charge our producing cattle with an average consumption of eleven hundred pounds of hay per month, we will find that during the month of September the producing animals of our dairy herds returned \$29.76 per ton of hay consumed. Since the dry cows of the herd are maintained at the expense of the producing ones, it is only fair to reduce this gross return of \$29.76 per ton of hay by charging the milking cows with 16% more hay to make allowance for hay eaten by the dry cows. With these deductions we still have a gross return of \$25.64 per ton of hay marketed through our dairy herds.

L. E. Cline.

North Platte

Almost every day during the week ending October 6, calls to examine sick hogs were received. Requests came from north of the river where many herds are infected with necrobacillosis. The cholera outbreak south of the river seems to be checked. No new cases have been reported for about five weeks.

Two cases of blackhead in turkeys were reported and assistance asked for. A culling demonstration was given in Spottedtail community.

The first part of the week ending October 13 was spent in the eastern part of the state selecting a herd boar for the Experiment Farm and a Poland China boar for M. L. Keisel, a local breeder.

While in Lincoln a conference was held with Dr. S. W. Alford of the Veterinary Department of the College of Agriculture.

Cases of sickness among hogs that have been reported recently are mostly north of the river. Necrobacillosis seems to be the trouble.

D. H. Propps.

Sun River

All field work for the week ending October 6 was devoted to farm lateral surveying. Three hundred and twenty acres were laid out. Nine calls were received during the week for help in this work. Those farmers that expect to irrigate this fall are considered first.

Potato harvest is well under way. The crop is about 20% below average due to the early frost. U. S. No. 1's are bringing 85¢ per hundred, f.o.b. at this station.

Blaine Kelsey.

Uncompahgre

The week ending September 22 was spent at the Montrose fair and en-route to Pueblo to attend the State Fair.

The livestock exhibits at the local fair were better as a whole than last year. There were fewer entries in the swine department but the average quality was considerably higher. The decrease in numbers was due to the decline in club exhibits, entries by adult exhibitors being larger than formerly. A club boy won the grand championship on Duroc-Jersey sows. In the beef cattle classes there were more entries than ever before, while the dairy classes were somewhat smaller than they have been. The sheep show was probably the best ever held here. In open competition the grand championship on Hampshire ewes went to a club member who has been county champion of his club for four consecutive years. The poultry display was one of the best ever seen at this fair. The premium for the highest scoring bird was won by a poultry club member.

Uncompahgre (continued)

On Wednesday the regular stock judging contest for club members was held to select a team of three for the state contest and competitive demonstrations in cooking, canning, sewing, and poultry culling, were held each day to select teams in these projects. On Saturday the trip to Pueblo was begun in five automobiles, with seventeen club members chosen as champions of their respective clubs or to represent the county on various teams.

Annual leave beginning Friday, September 28th of the week ending September 29 was taken at Pueblo until Saturday noon, October 6th.

Club members from Montrose county with Mr. King, two chaperons and the demonstration agent reached Pueblo Sunday evening and reported at the club camp on the State Fair Grounds where two large brick dormitories have been built since last year, greatly improving the camp. About 400 members were enrolled this year, a few less than last year. All of one day was taken up with the stock judging contest in which Montrose county won fourth place again. The Montrose Cooking team won first place, the canning and poultry teams second and the sewing team third. A Delta county pig club boy won the state championship in the pig club and first in a "pig showing" contest. He also won second on his gilt in open competition in a very strong class.

Exhibits in all livestock departments were about up to standard, Duroc-Jersey and Poland-China hogs, Hereford and Holstein-Friesian cattle being the strongest classes.

Half of the week ending October 13 was spent in the office on back reports, correspondence, etc.

Delta is preparing a city ordinance requiring the tuberculin testing of dairy cows. By the request of the mayor a trip was made to Delta to confer regarding this ordinance. Some time has been given also to this work at Montrose.

One small flock of hens was culled. One flock of turkeys, affected with some peculiar malady was inspected. Many of the birds in this flock were lame, some being unable to walk. Tuberculosis was suspected but not found on post mortem examination. A change in feed with the addition of mineral was advised and will be tried.

Two of our largest herds of dairy cows are to be sold soon which may take care of most of the local demand for cows, so that it may not be necessary to import anything. An inquiry for 20 cows was received from one man at Delta.

Work has been begun on a winter poultry show to be held at Delta. A premium list will be printed as soon as possible.

A visit was made to a farm near Montrose where trouble has been experienced from sows eating their pigs. This is one of the farms on which potatoes have been so extensively fed to hogs. A change of ration was recommended and the owner has purchased a ton of tankage to use with grain and hay. Eleven other farm visits were made.

H. A. Ireland.

W E E K L Y R E P O R T S
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Western Irrigation Agriculture

San Antonio

During the period from September 23 to October 13, inclusive, the following meteorological data were recorded: Maximum temperature 94, minimum temperature 63, greatest daily range 28, and precipitation 0.50 inch. The precipitation occurred as intermittent, scattered showers on October 10, 12 and 13 respectively. Twelve days of the period were clear, seven partly cloudy, and two were cloudy.

The second generation of cotton leaf worms, the appearance of which was reported for the week ending September 15, defoliated only a small percentage of the cotton. A third attack by this worm occurred the week ending October 13, during which time all cotton on the station was completely defoliated.

Farm work accomplished during the period included the following: Completion of cotton picking for the season; harvesting second crop of sorgo and third crop of Sudan grass from rotation plats; harvesting third crop of alfalfa from field E3; plowing rotation plats; cultivating nurseries and orchards; mowing weeds; disking fallow; and miscellaneous chopping of weeds and Johnson grass.

Mr. A. D. Harvey of the office of Crop Acclimatization and Adaptation Investigations left for Greenville, Texas October 2. Mr. W. W. Ballard of the same office returned to the station October 10 for the purpose of getting final field notes on this season's cotton experiments.

George T. Ratliffe.

Scottsbluff

The average maximum temperature for the week ending October 20 was 61 with a maximum of 71 on the 16th; the average minimum was 29 with a minimum of 22 on the 20th. There was no precipitation for the week.

During the week the third cutting of alfalfa was placed in the stack. It was not in the best of condition as it had been through two weeks of very wet weather. The yields for the season are given in the attached table.

The potatoes in Field K were also harvested during the week. The yields (see accompanying table) were very poor owing to the fact that the blight was very bad.

YIELDS OF POTATOES--SCOTTSBLUFF EXPERIMENT FARM
Season of 1923.

			% of Total		
Plat	Rotn.	Yield per Acre	Over 2	Culls	
1	4	38.0	37	63	
5	27	106.7	49	51	
15	25	130.0	59	41	
17	21	99.7	53	47	
2	26	57.6	26	74	
4	31	121.3	57	43	
7	61	156.4	74	26	
13	40	171.4	70	30	
17	20	68.3	39	61	
4	30	101.4	46	54	
7	60	154.0	75	25	
13	44	138.6	56	44	
17	24	74.7	36	64	
7	64	187.7	78	22	
15	71	119.0	55	45	
Maximum		187.7			
Minimum		38.0			
Average		115.0	59	41	

YIELDS OF ALFALFA - SCOTTSBLUFF EXPERIMENT FARM.

Season of 1923.

		Tons per Acre			
Plat:	Rotn.:	1st	2nd	3rd	
		Crop	Crop	Crop	Total
11	65	1.20	1.68	1.16	4.04
6	61	2.14	1.87	1.38	5.39
11	61	1.17	1.20	0.92	3.29
12	40	1.09	1.27	0.74	3.10
6	60	2.08	1.87	1.23	5.18
11	60	1.34	1.03	0.86	3.23
12	42	1.20	1.10	0.70	3.00
6	62	2.11	1.89	1.36	5.36
11	62	1.24	1.12	0.92	3.28
12	44	1.18	1.31	0.70	3.19
1	3	1.88	1.39	0.78	4.05
6	64	2.00	1.88	1.34	5.22
10	64	1.60	1.37	1.16	4.13
11	64	1.46	1.42	1.34	4.22
12	48	1.06	1.08	0.86	3.00
18	71	1.14	0.99	0.98	3.11
Maximum		2.14	1.89	1.38	5.39
Minimum		1.06	0.99	0.70	3.00
Average		1.49	1.40	1.03	3.92

Demonstrations on Reclamation ProjectsBelle Fourche

For the week ending October 20 considerable time was given to club work. The club year begins November 1 at which time clubs should be organized and leaders selected. Seven schools were visited and from the interest shown a much larger enrollment can be expected this year than during the past year. Two club members put on a successful poultry culling demonstration Saturday evening at the movie show at Newell.

Rains with heavy roads continue to make automobile travel impractical at times. One community meeting was attended during the week and one meeting postponed because of the condition of the roads. The livestock census of the project is being checked over and brought up to date with special emphasis placed upon the number of registered stock on project farms.

The price of butterfat jumped from 40 to 45 cents during the week. Eggs are now bringing the farmers 30 cents per dozen.

Frank E. Miller.

Minidoka

Most of the agriculturist's time during the week ending September 29 was taken up with miscellaneous dairy matters, and particularly with preparation for Bull Association organizations.

Sales of dairy cattle on the project continue to be fair. A noticeable feature of sales of dairy cattle is that cattle of Holstein breeding are beginning to show higher selling value than those of other breeds. An estimated average would be \$20.00 per head for animals showing a preponderance of Holstein blood.

The report for the week ending October 6 reveals some demand for poultry culling but the principal matter of interest was in cutting and storing of ensilage. Most of the silos on the project were filled this week, a few the week before. Ensilage corn raised on the project was of excellent quality and went into the silos in fine shape. The principal criticism of the corn crop would be that the yield was not sufficient. The quality is excellent and should give us some very fine winter feed.

Farmers in the neighborhood of Oakley, which is an adjoining project, are catching the spirit of dairying from Minidoka and last week increased their cheese factory receipts from about 2,500 to more than 4,500 pounds of milk.

Cheese factories are paying 51 cents for fat; the cream stations are paying 37 cents for sour cream and 40 cents for sweet cream.

Minidoka (continued)

One of the most interesting occurrences of the week ending October 13 was the visit of President Upham of the Idaho University, including the Agricultural College, to the project. The business men of Burley met at luncheon with President Upham and later escorted him about the project to give him a fair idea of the agriculture of the project and the best ways the University could serve the farmer. This was a very interesting and helpful meeting. The spirit was fine.

Most of the agriculturist's time during the week ending October 20 was spent laying the foundations for the Bull Association. He encountered the usual difficulty of lack of money and is trying with dairymen to devise some plan whereby credit may be secured for reliable men who do not have the ready cash.

A sale of thirty head of dairy cattle on the project shows that the interest in dairying is still healthy. Cows all sold at very good prices, varying with the quality of the cattle.

Our exhibit of dairy and beef cattle returned from the Fair Circuit where they have been giving a very good account of themselves. The project bull showed in four fairs, including the Cache Valley and Utah Fairs, and was first in class and Grand Champion at every fair. This bull is a Buffalo Doede out of an Ormsby cow and has very creditably advertised the dairy stock on the project to outside interests, so thoroughly indeed, that we have a call for a carload of Holstein bulls from this project at fair prices, which shows rather conclusively that it pays to advertise dairy cattle. The beef herd shown on the same circuit has resulted in the sale of a carload of breeding stock to buyers outside of the project.

J. T. Montgomery.

Shoshone

The agriculturist used part of two days of the week ending October 13 helping prepare a list of farmers who need help and apportioning available labor to such farmers. The remainder of the week was given to miscellaneous livestock work including a summary of milk sheets, milk testing and a visit to Deaver and Frannie to confer with several farmers who are interested in dairying.

It has been planned that all business places in Powell shall be closed October 16, and that townspeople shall on that day go to the fields to assist the farmers. This procedure seems highly advisable due to farm work being delayed about three weeks by rains.

On Tuesday of the week ending October 20 almost every business man of Powell, 15 employees of the Reclamation Service and the Agriculturist, worked in the potato or beet fields according to a prearranged plan. The potato harvest is now practically completed, but another week will be required to get the remaining beets to the dump.

About 1,000 aged ewes were purchased by project farmers during the week. They cost \$4 each, the terms being \$1 down and the balance payable in the spring. Arrangements have been made by several men to go to Penrose, Wyoming Monday to look at a flock being offered for sale at the same price by the Penrose Sheep Company.

The price of butterfat is 43 cents per pound.

Shoshone (continued)

Milk testing and matters relating to the purchase of ewes by farmers, use of purebred dairy bulls and the marketing of turkeys received attention.

In cooperation with Mr. Irwin, manager of the Big Horn Cooperation Association, instructions about the feeding of turkeys for market, and the organization's plans for assembling beans and turkeys for shipment were prepared for publication in the Powell paper.

G. A. Wright.

Sun River

Work was continued in farm lateral surveying during the week ending October 13. Two-hundred and twenty acres were laid out. Five calls were received for help in this work.

Two days were spent with the Project Manager in making final arrangements for harvesting the trial patches of sugar beets. Not a single farmer has any previous experience in harvesting beets and difficulty will likely be experienced in digging the first beets. The beets have shown a very thrifty growth and the growers are very enthusiastic about the future outlook. The farmer here will receive the regular price for beets paid at the factory, minus one half of the freight rate of \$2.10. The Sugar Company will stand the balance of the freight.

One and one half inches of rain fell during the first part of the week. This moisture, the first that has fallen in five weeks will help materially in putting the ground in shape for fall plowing.

The work during the week ending October 20 was devoted to those farmers raising trial fields of sugar beets. This office has been placed in charge of all the details of harvesting. There are twelve of these fields, ranging from one acre to five in size. Demonstrations were given on each farm on digging, topping, and loading the beets. All farmers have begun harvesting and they are making very satisfactory progress. The tonnage so far is 13 tons per acre, which is about two tons higher than last year's state average. This is very encouraging for the beet industry in this section in as much as the farmers were handicapped by lack of proper machinery for working the beets and inexperienced in their culture; and it clearly shows that sugar beets can be raised with this soil and climate.

The weather is remaining very mild for this season of the year. The harvesting of the potato crop is progressing rapidly.

Blaine Kelsey.

W E E K L Y R E P O R T S
Of the Offices of
WESTERN IRRIGATION AGRICULTURE
And
DEMONSTRATIONS ON RECLAMATION PROJECTS

Vol. XXIII

October 27, 1923.

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Western Irrigation Agriculture

Newlands

Mr. Knight reports as follows:

"The meteorological data recorded at this station for the period September 24 to October 22 is as follows:- Mean maximum 67.8; maximum 79 on October 3; mean minimum 35.4; minimum 25 on October 14th and 18th; rainfall .02 inch on the 26th; trace on the 3rd; .09 inch on the 6th; .07 inch on the 10th; .01 inch on the 11th; and a trace on the 16th; making a total of .19 inch.

The greater part of this period has been devoted to harvesting crops. Those harvested were, third crop alfalfa, potatoes, variety corn, and the balance of the fruit and vegetables. The potatoes were so badly infected with disease during the growing season that the results cannot be taken as truly representative of an average crop.

A carload of gypsum was received the last week. Most of this will be used in the usual treatments given the rotation plats and a reclamation experiment that has been planned for Y13.

Two irrigations were given during this period. One on the 9th of October took in plats F10, 12, and 13; all of G; and Y2 to 18 inclusive, with the exception of Y13. The other given on October 16 took in the pasture, D4, 8; F4; 16; and H12 to 26 inclusive.

The cow pasturing experiments have been completed. Following are given the carrying capacities per acre of each of the three pastures:-

Rye pasture	One cow 99 days
Sweet Clover pasture.....	" " 186 "
Mixed Grass pasture	" " 230 "
Sweet Clover #2	" " 210 "

Newlands (continued)

ALFALFA YIELDS--1923

		:	:	Total Yield	
		:	Area :	3 cuttings	
Plat No.:	Acres:	Per Plat	:	Per Acre	
:	:	Pounds	:	Pounds	...
B11-22	:	4.60:	19635	:	4270
D 3	:	.34:	1645	:	4836
4	:	.34:	1450	:	4280
7	:	.51:	1930	:	3785
8	:	.46:	1605	:	3490
F 1	:	.25:	620	:	2480
2	:	.25:	1180	:	4720
3	:	.25:	1540	:	6160
4	:	.25:	1335	:	5340
7	:	.25:	685	:	2740
10	:	.25:	360	:	1440
13	:	.25:	1985	:	7940
14	:	.25:	1690	:	6760
15	:	.25:	1950	:	7800
16	:	.25:	1725	:	6900
H 1	:	.40:	2900	:	6260
2	:	.40:	2955	:	6142
5	:	.40:	4350	:	10890
6	:	.46:	2290	:	4975
7	:	.51:	1960	:	3840
8	:	.42:	2910	:	6925
14	:	.56:	3725	:	5654
15	:	.56:	4225	:	7545
16	:	.56:	3825	:	6825
17	:	.56:	2160	:	3858
18	:	.33:	2450	:	7394
19	:	.33:	2250	:	6815
20	:	.33:	1150	:	3486
21	:	.31:	1475	:	4762
22	:	.31:	1425	:	4603
23	:	.31:	1625	:	5240
24	:	.31:	1375	:	4440
25	:	.31:	1350	:	4359
26	:	.31:	600	:	1936
Y 2	:	.45:	1475	:	3279
3	:	.45:	3085	:	6860
4	:	.45:	2035	:	4523
5	:	.45:	1460	:	3243
6	:	.45:	2100	:	4657
7	:	.45:	2225	:	4935
8	:	.45:	2050	:	4548
9	:	.45:	2722	:	6040
10	:	.45:	2100	:	4657
11	:	.45:	625	:	1388
12	:	.45:	550	:	1222
TOTAL		:	21.38:	104,762	:
AVERAGE		:	:	:	4900

Newlands (continued)

P O T A T O E X P E R I M E N T -- 1923

			:Seed	: Wt. of	: Wt. of	: Total	: Marketable
			: to 260'	: Market-	: Culls	: weight:	: Minus
			: row	: able, lb.	: lbs.	: lbs.	: Seed lbs.
2	Netted Gem	: Cut	:	: 54	: 16	: 70	:
3	Quick Meal	: Medium Cut	: 22	: 72	: 18	: 90	: 50
4	" "	: " Whole	: 83	: 76	: 66	: 142	: -7
5	" "	: Small Cut	: 22	: 68	: 32	: 100	: 46
6	" "	: " Whole	: 42	: 90	: 70	: 160	: 48
7	Netted Gems	: Seed End	:	: 127	: 41	: 168	:
8	" "	: Butt End	:	: 105	: 51	: 156	:
9	" "	: Middle	:	: 97	: 46	: 143	:
10	Quick Meal	: Small Cut	: 21	: 129	: 56	: 185	: 121
11	" "	: Med. Cut	: 20	: 89	: 55	: 144	: 69
12	" "	: Large Cut	: 22	: 114	: 22	: 136	: 92
13	" "	: Medium Seed End	:	: 157	: 71	: 228	:
14	" "	: " Butt End	:	: 144	: 55	: 199	:
15	" "	: " Middle	:	: 93	: 49	: 142	:
16	" "	: Small Halved	: 23	: 128	: 64	: 192	: 105
17	" "	: Medium "	: 39	: 118	: 82	: 200	: 79
18	" "	: Large Quartered	: 30	: 137	: 44	: 181	: 107
19	Sprouted seed	:	:	: 77	: 38	: 115	:

Newlands (continued)

HOGS ON SELF FEEDERS

		Pasture	Hay	W.
		Barley	Barley & Milk	Barley & Milk
		:	:	:
Number days fed		: 42	: 42	: 42
Initial weight	lbs	: 539	: 516	: 483
Final weight	"	: 937	: 987	: 883
Gain, total	"	: 398	: 471	: 400
Gain, daily per head	"	: 9.47	: 11.21	: 9.52
Gain, daily	%	: 1.32	: 1.58	: 1.46
		:	:	:
Barley fed	lbs	: 1,624	: 1,619	: 1,635
Value barley @ 2¢	\$: 32.48	: 32.38	: 32.70
Total cost	\$: 32.48	: 32.38	: 32.70
Cost per 100 lbs. gain	\$: 8.16	: 6.87	: 8.17
		:	:	:

E. W. Knight.

Scottsbluff

The average maximum temperature for the week ending October 27 was 44 with a maximum of 72 on the 22nd; the average minimum was 25 with a minimum of 12 on the 27th; the precipitation amounted to 0.82 inch, 0.12 of it being snow.

The week has been cloudy and stormy. Work was commenced Tuesday in harvesting the beets in Field K. Rain stopped the work at noon. It snowed some Wednesday and snow flurries came each day the balance of the week.

Some work was done in the dairy barn, putting in concrete floors, etc.

During the week the station was visited by Dean E. A. Burnett and W. W. Burr, Agronomist, of the Agricultural College; Chancellor Avery and Regent Warner of the University of Nebraska.

A summary of the pasturing tests with steers carried on at the station during the past summer follows:

SUMMARY OF STEER PASTURING EXPERIMENT--1923.

Scottsbluff Experiment Farm

The steers used in this test were brought on the Denver market on April 23, 1923. They were 3-year olds, white or brockle-faced and very thin, showing signs of having been wintered perhaps on straw stacks. They were wintered in Colorado, but perhaps originated from farther south. They would have been classed as fair to good stockers. The steers averaged 703 pounds at Denver and cost \$7.90 per cwt with freight paid to the river markets. Good to choice stockers would have cost \$8.00 per cwt. plus the freight.

From the time the steers arrived at the station until they were put on pasture they were fed straw, hay and corn silage. On May 24 when the

Scottsbluff (continued)

test began the steers averaged 757 pounds, having put on a fill of some 50 pounds.

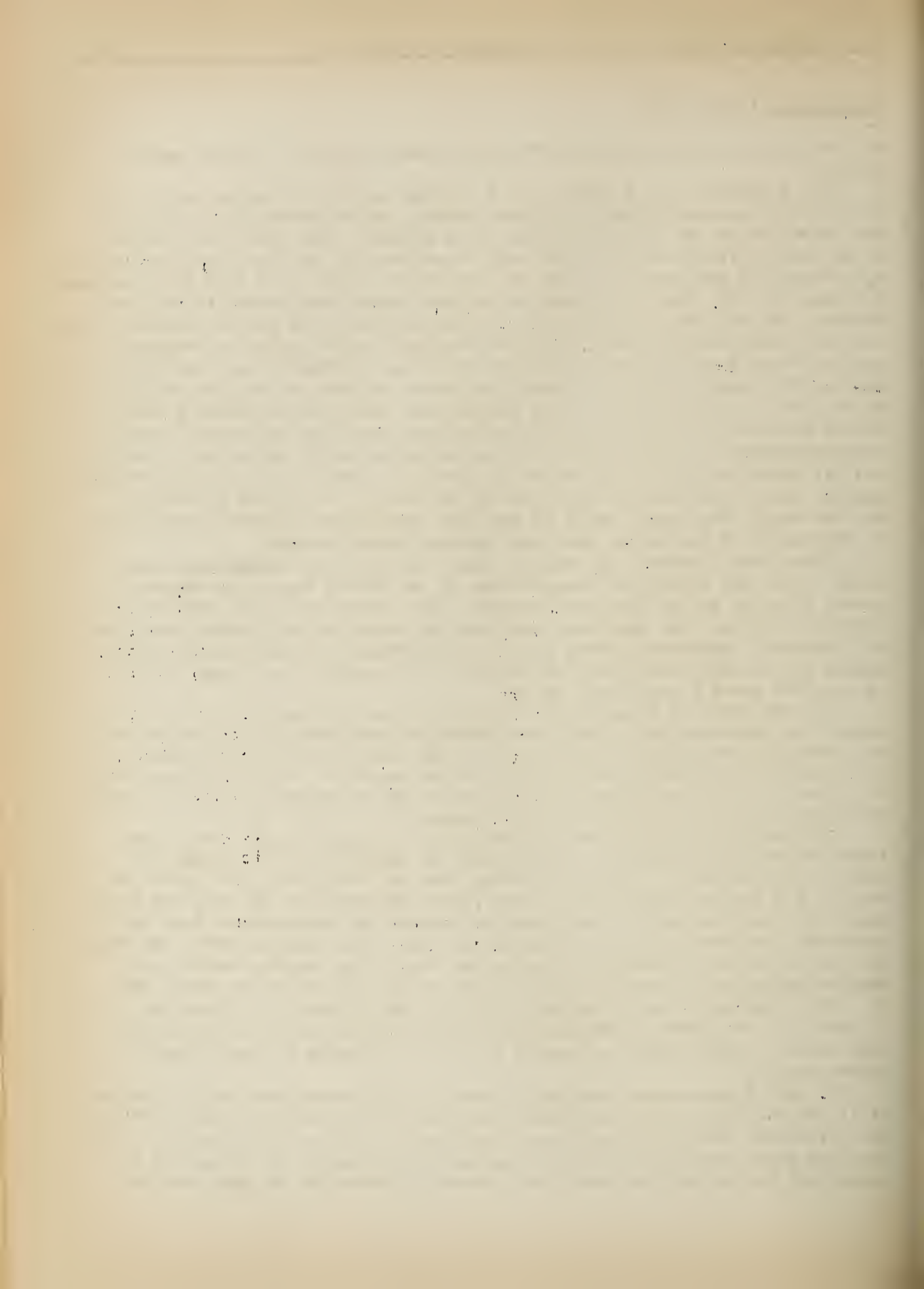
The 75 steers were divided into 3 uniform lots of 25 steers each. One lot was put on sweet clover with corn, another lot on sweet clover alone and the third lot on the 800-acre native grass pasture. The clover was about 8 or 10 inches high when the steers were turned on it. For the first few days the steers did not seem to relish it, but after a week or 10 days they developed a liking for it. When they began eating the clover they grazed it very unevenly. In small patches--8 or 10 feet square--the sweet clover would be eaten off very close to the ground, while other places would hardly be touched. The rather coarse succulent stems appeared to be more palatable than the leafy part of the plant. Where the clover was eaten so close to the ground it killed out badly. Had the clover been grazed even close to the ground before it became so large, it is doubtful if any killing would have occurred. Under farm conditions it is advisable to begin pasturing sweet clover rather early but not too heavy and then increase the number of stock as the season advances and the clover increases in its carrying capacity. The object in holding the steers off the clover until it had made considerable growth was to avoid overpasturing it during the cool slow growing spring season.

There were 3 steers per acre of sweet clover at the beginning of the test. After the killing of considerable of the clover due to the steers eating it close to the ground in patches, this proved to be too many steers where no corn was fed, but where corn was fed there was not enough steers for the pasture. Additional clover pasture was provided for the straight clover steers so that they had plenty of pasture. The increase was enough so that it required about 1 acre for 2 steers.

It took rather a long time to bring the steers getting corn up to 20 pounds per steer per day. They were started on corn when put on pasture and was gradually increased as fast as they would take it until they reached a full ration of 20 pounds per steer per day on August 5. From this date until the close of the test--October 6-- the steers ate 20 pounds per head per day, or a total for the whole test of 2,094 pounds.

The steers on straight sweet clover were removed from the clover and taken to the 800-acre native grass pasture on August 13. This change was made for two reasons: First, the steers were not doing well, not nearly so well as the ones on grass pasture, and it was thought that the test was long enough to show that sweet clover pasture without any supplemental feed was practical for aged steers; and second, the nights were getting cooler so that the clover was not producing the amount of feed it did earlier and it was thought advisable to make the change so as to use all the sweet clover for the steers getting corn. From September 12 until October 6 the corn-fed lot was on a new field of sweet clover which had been seeded in the spring with barley. This field was from 1½ to 2 feet high when the steers were turned into it.

On June 7 six shotes, weighing a total of 800 pounds were put behind the steers and on July 9 five more shotes weighing 870 pounds were added. These 11 shotes were removed on September 9 weighing a total of 2,920 pounds. They were replaced with 18 spring pigs weighing 1,225 pounds. At the end of the experiment the 18 pigs weighed 1,626 pounds. Neither lot of hogs were fed



Scottsbluff (continued)

any additional feed. The total gain made by the hogs while following the steers was 1,650 pounds of 66 pounds of pork per steer.

Considerable trouble was experienced from the steers bloating. This trouble, however, always occurred when the steers were changed to fresh pasture after, perhaps, being held on the old pasture too long. When the dividing fence was removed so that they had access to all the pasture, no more trouble was experienced from bloat. Two steers in the straight sweet clover lot died from bloat and the trocar was used on three others--two from the straight clover lot and one from the corn-clover lot.

The steers were driven from the 800-acre pasture and from the station to Mitchell and weighed the following morning. They were then shipped to Omaha, each lot separate, and sold on a very poor market. The following table gives a summary of the experiment:

	:Corn :Sw Clover	:Sweet :Clover	: Native : Grass
Number in Lots	: 25	: 25	: 25
Weight beginning of test	: 757	: 757	: 757
Weight end of test at Mitchell	: 1040	: 971	: 1012
Weight at Omaha	: 1012	: 890	: 982
Total Gains made	: 255	: 133	: 225
Cost of steer per cwt	: \$7.90	: \$7.90	: \$7.90
Total cost per steer freight paid	: \$56.11	: \$56.11	: \$56.11
Selling price per cwt at Omaha	: \$8.00	: \$5.40	: \$6.00
Returns per steer	: \$76.81	: \$44.65	: \$54.29
Pork per steer-pounds	: 66	:	:
Value of pork per steer @ 8¢	: \$5.28	:	:
Corn fed per steer	: 2094	:	:
Pounds corn per 100# gain	: 822	:	:
Total cost per steer	: \$91.71	: \$56.11	: \$56.11
Loss per steer	: \$9.62	: 1/11.46	: 1.82

1/ This does not take into consideration the two steers that died from bloat.

Demonstrations on Reclamation ProjectsBelle Fourche

But two days of the week ending October 27 were spent in the field. Rains and snow the last four days made travel by automobile impossible.

Seven schools were visited during the week in the interest of club work for boys and girls. Two articles were written for publication.

Butterfat is quoted at 42 cents at the local cream stations, and eggs bring the farmers 30 cents per dozen.

Frank E. Miller.

Flathead

Two days of the week ending October 20 were spent on a trip to Kalispell and Creston to get a Red Polled bull for a Moiese farmer, who accompanied me on the trip. We were able to locate and purchase a 4 month old bull calf with ancestry ranking high as beef cattle as well as at the pail. It's sire's dam made a record of 517 pounds of fat while its dam has a record of 448 pounds of fat. The sister of the dam won the sweepstakes in beef cows at the Kalispell fair this fall.

While at Kalispell, a conference was held with the County Agent and two of the veterinarians now on tubercular testing work in Flathead county.

There was considerable rain the first of the week. The first general killing frost was on the night of the 18th. It was necessary to take time to put up a heater and clean up the garage to make room for fuel which was also provided.

A press article on the tuberculosis campaign was prepared. One is being run each week in the project papers.

Among farm calls were some to assist in getting proper milking machine adjustment, locate a serviceable sire for the man getting the bull calf, interest several farmers in a sale of Holsteins held this week, and udder trouble.

One culling demonstration was conducted and one flock culled.

Two days of the week ending October 27 were used in fixing up the place and equipment for testing milk and in various office work.

Dr. Murdock, Federal Veterinarian in charge of tuberculosis work in the state, and Dr. Warwick, Federal Veterinarian at Missoula called for a conference in connection with the testing to be done in Lake County.

Three culling demonstrations were held and farm flocks culled. Avian tuberculosis was found, demonstrated and explained at one of these farms, and eradication methods outlined.

Assistance was given in locating Red Polled bull for rental and insuring bull calf. A case of mammitis was diagnosed and treated. Suggestions for feeding and care of calves were given.

Caponizing was demonstrated for one farmer.

Blackleg is being reported from a number of localities and some work is being done in locating vaccine, which was not on hand locally.

L. B. Miller

Newlands

Much of the time during the week ending October 20 has been devoted to the reorganization of the Newlands Project Herd Testing Association. It has been necessary to see a large per cent of the former members of the association and to arrange the itinerary of the tester. Two articles were contributed to the local papers, one setting forth the summary of the September herd testing work, the other containing notes on the turkey market and the supplying of the pre-holiday trade, also the prospect for developing the feeder hog industry on the project.

During the week two farmers made inquiry for dairy cattle and two farmers made inquiry for registered bulls. There are invariably one or two more orders for dairy cattle or dairy bulls in the hands of this office continually.

L. E. Cline.

North Platte

A state conference of county agents was attended at Lincoln the last part of the week ending October 20.

Hog cholera has appeared north of Minatare. Quite a number of herds are infected and considerable vaccinating was done, during the first half of the week.

Dr. R. M. Edwards, an experienced veterinarian, has opened an office in Gering and Scottsbluff and some of the veterinary work reported to the Experiment Farm is being turned over to him. Eventually practitioners may be able to attend to most of the work of that kind.

During the week ending October 27 some time was spent locating dairy stock. There is a strong demand for producing cows, and a number of farmers want bulls. The local supply is limited. But few bulls ready for service are for sale.

Hog cholera has appeared in several herds north of the river. The disease is pretty well scattered and a great deal of vaccinating will have to be done. Three days of the week were spent assisting farmers in checking the outbreak. Most of the purebred breeders are immunizing their herds.

D. H. Propps.

Uncompahgre

Regular monthly milk tests and records have taken most of three days of the week ending October 20. Complete records of feed and production are not yet being kept on some of the herds which are being tested but in a number of others some very satisfactory records are being kept.

Some time has been given again to tuberculosis work, securing signatures on a petition for a general test in Montrose county and assisting in drawing an ordinance for Delta similar to the one in effect at Montrose. It is expected that state and federal veterinarians will be here about November 1 to

Uncompahgre (continued)

begin testing. Nearly all of that part of the project in Montrose county will be included in a tuberculosis eradication area under state and federal supervision.

A conference was held with the dairy committee of the Farm Bureau, and county agent King relative to importation of dairy cows. Several inquiries have been received which have been referred to local men who have cows for sale. Preliminary work on the winter poultry show to be held in Delta in January has been done. A premium list will be issued as soon as it can be done.

Five short articles were written for local papers.

H. A. Ireland.

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W E E K L Y R E P O R T S

Of the Offices of

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Western Irrigation Agriculture

Yuma

The maximum temperature for the week ending October 27, was 96; minimum 36; greatest daily range 48; precipitation 0. On the morning of the 24th, when the minimum temperature of 36 was recorded at the station, a light frost was reported at Gadsden in the lower part of the Yuma Valley. There seemed to be no apparent damage to the cotton crop.

Cotton picking and ginning on the project continued in a very satisfactory manner. Up to the present time approximately 6200 bales have been ginned. The estimated yield for the project will be around 1,800 bales from about 23,000 acres. Lint is now selling locally around 30 cents per pound and seed is bringing \$42.00 per ton at the gins.

Good yields and good prices are causing a general feeling of prosperity on the project. Business in general is reported to be exceptionally good.

Station work performed during the week included the seeding of barley and vetch combinations B-1 to 6; plowing plat variation lands C-32 to 35; heading grain sorghum varieties E-3 to 8; cotton picking on the irrigated rotations; general irrigating and the cleaning of ditches.

Mr. T. H. Kearney was a station visitor on October 20.

E. G. Noble.

Demonstrations on Reclamation Projects.

Belle Fourche

For the week ending November 3 heavy roads prevented travel by automobile until late in the week.

An attractive window display was assembled consisting of local pictures mounted on large cardboard sheets, charts and posters pertaining to livestock improvement and club work. The "true Type" colored pictures put out by the Holstein-Friesian Association printed on muslin formed an impressive background. This exhibit will be moved to all communities of the project from time to time.

The sale of club livestock is planned for the middle of this month, one sale to be held at Belle Fourche and one at Vale.

Prompt vaccination of hogs held the loss from cholera outbreaks at two farms to six animals.

Butterfat now brings 45 cents and eggs 30 cents on the local market.

Frank E. Miller.

Flathead

A considerable part of the work during the week ending November 3 was on the tuberculosis campaign which started Thursday with the arrival of Dr. McDonald. The townships or units are being mapped in detail as to location of farms and of roads. These maps are for use in this office as well as to assist the veterinarian in his work. It is planned to have an accurate set of these at the end of the campaign so that a record will be had of location and name of practically every farmer on the project. The veterinarian will assist in getting a survey of stock.

Three farmers' meetings were attended and the tuberculin work explained. Dr. Warwick of Missoula attended one and gave an illustrated talk.

Word was received that State and Federal dairymen will be in the valley December 8-13 and meetings are being arranged accordingly.

One flock of poultry was culled and culling was demonstrated.

L. B. Miller.

Shoshone

During the week ending October 27 storms and cold weather greatly interfered with the beet harvest so that at the end of the week it was estimated that not less than 20% of the crop was still in the ground.

A carload of beans were loaded at Garland on the 22nd. This is the first installment on a contract between the Big Horn Cooperation Marketing Association and a Chicago Wholesale firm involving the payment of 5¢ per pound by the latter for recleaned beans. Machinery for recleaning has been set up at Basin, Wyoming.

The week was given largely to matters relating to the fitting of turkeys for market and the purchase of aged ewes. Requests for information about feeding were numerous and several turkey dressing demonstrations have been planned for the week ending November 3. Assistance was given to 4 farmers who secured together 200 ewes.

Butterfat remained at 43¢ per pound. The Marketing Association has received an offer of 31¢ a pound for dressed turkeys.

During the week ending November 3 the Cooperative Marketing Association operating on the Shoshone Project with its head at Basin, Wyoming signed a contract with Swift & Company under which it is able to pay producers the following prices: No 1 dressed birds 31¢ a pound, No. 2 dressed, 26 cents, No. 1 live, 25 cents and No. 2 live 20 cents. These prices are so good that a Butte firm which maintains an office at Powell has stopped buying. Receiving by the Association began at Powell and Garland Saturday, facilities for dressing having been previously provided. One thousand birds were received at Powell along on the first day.

Most of the activities of the week were connected with the turkey industry. Mr. Murphy, a representative of a Chicago consignment firm was assisted in conducting two dressing demonstrations and a large number of growers were provided with needed information by visit, conference or letter. Feeding, dressing and marketing were the points which called for attention.

Shoshone (continued)

Some work was done towards a collective shipment of cattle about November 26.

Senator S. A. Nelson of Powell secured a fine Rambouillet ram for from Lyman's farm, Otto, Wyoming, the consideration being \$150.

G. A. Wright.

Sun River

During the week ending October 27 sugar beet harvesting was temporarily stopped by a light rain that fell on Monday. The farmers are making fine progress with the beets. Three cars were loaded during the week.

About one third of the potatoes remain to be harvested. There is danger any day of a killing frost. Schools have been closed and every effort is being made to speed up the digging.

Two days were devoted to work on the annual report.

For the period October 28 to 31 Mr. Kelsey reports as follows:

"A heavy frost delayed digging in the sugar beets for two days. All but one car of beets is now loaded. A final estimate of the beet tonnage is eleven tons per acre. The test of sugar content of these beets has not been received from the factory.

Tuesday and Wednesday were spent working on the annual report. Work for the season by this office was discontinued on October 31.

Blaine Kelsey.

Uncompahgre

On account of bad weather and roads, most of the week ending October 27 was spent in the office. Work on a premium list for a poultry show, on a proposed importation of dairy cows, arranging files and miscellaneous calls has occupied the time.

Two trips to Delta were made in connection with the poultry association. Arrangements are pretty well under way for a show to be held in January.

Two conferences have been held with directors of the local Water Users' Association in regard to a series of meetings to be held in Denver next week. By the request of the directors the Demonstrations Agent will attend these meetings.

On Saturday afternoon a meeting of water users was attended, at which Mr. Cannon was present to discuss general conditions and needed relief on the project. Much interest was shown. The first snow of the season fell on Wednesday, October 24. Considerable rain has also fallen delaying the harvest of potatoes and apples.

H. A. Ireland.

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Western Irrigation Agriculture

San Antonio

Mr. Ratliffe reports for the 3 week period ending November 3 as follows:

"The three weeks period ending November 3 has been one of much rain with very little total precipitation. Rainfall was recorded for nine days out of the twenty-one, with a total of only 1.14 inches. A large percentage of this precipitation came in the nature of an "Oregon mist". Field work was possible for only short intervals of time. The following temperatures were recorded for the period:- maximum 84, minimum 41, and greatest daily range 33.

Hand threshing of flax varieties grown in nursery rows was completed. Samples of corn from various fields, variety plats and rotation plats, taken at the time of weighing the crop over the scales, were weighed and shelled for the purpose of determining crib dry yields and shelling percentages.

Selection 1913 oats were seeded in fields B3 and C3. Arnautka wheat was seeded at the rear of the farm residence. Other work accomplished during the period included:- removing dead trees from orchards; cutting cotton stalks; shelling corn, cleaning grain; sawing wood; and a general clean-up of farm fields, roads, and fences.

Messrs. Cook, Doyle, McNamara and Baker, of the Office of Crop Acclimatization and Adaptation Investigations were station visitors October 26 and 27. Mr. W. W. Ballard of the same office left October 31 for Charleston, S. C. after completing this season's field notes on their cotton experiments at this station."

Geo. T. Ratliffe.

Scottsbluff

The average maximum temperature for the week ending November 10 was 57 with a maximum of 62 on the 9th; the average minimum was 27 with a minimum of 20 on the 8th. The precipitation was .62 inch on the 11th.

During the week the balance of the beets in Field K were harvested and the yields are given on the attached sheet. The beet harvest was considerably delayed by the storms and heavy freezes the week ending November 3 but the past week the growers made an especial effort and now practically all the beets are out of the ground, many of them going into silo. The field beets will probably all be in the coming week.

The potato market is dull, very few shipments being made. The price offered is 90 cents per cwt. A movement is on foot to organize a cooperative marketing association for the valley. The movement is being urged by officers of the Central Nebraska Cooperative Potato Marketing Association and a meeting will be held at Mitchell November 14 to take up the matter.

YIELD OF SUGAR BEETS SCOTTSBLUFF SUBSTATION, 1923.

Series	:	:	:	Total	Yield
& Plat	:	Rotation:	Pounds per plat	:	Tons per acre
I - 12	:	23	:	10065	20.13
I - 16	:	21	:	8520	17.04
II- 3	:	31	:	9660	19.32
II- 9	:	61	:	10075	20.15
II- 14	:	40	:	7885	15.77
II- 16	:	20	:	4480	8.96
II- 18	:	2	:	2915	5.83
III -1	:	18	:	4840	9.68
III -3	:	30	:	5340	10.68
III -9	:	60	:	7435	14.87
III-14	:	42	:	8380	16.76
III-16	:	22	:	4015	8.03
IV- 3	:	32	:	5660	11.32
IV- 9	:	62	:	7595	15.19
IV- 2	:	45	:	9170	18.34
V- 5	:	45	:	9335	18.67
V- 8	:	64	:	8580	17.16
O-14	:	71	:	9135	18.27
O-15	:	71	:	10930	21.86
Average	:	:	:	7580	15.16

James A. Holden.

Demonstrations on Reclamation Projects.Belle Fourche

Much of the week ending November 10 was spent at Two Top where Ericksons' Brothers sheep were dipped for scab for the fourth time. The lambs can now be marketed but the bucks and breeding ewes will have another dipping in about 10 days.

One community meeting at which 165 people were present was attended at Vale. At this meeting two club boys gave a demonstration on the selection and storing of seed corn. The poultry club of Newell entertained some of their friends at the high school with a fine chicken dinner. This club was organized and ready to take up the second year's work in poultry.

Butterfat remains at 45 cents on the project. Eggs bring from 33 to 35 cents per dozen while in Belle Fourche 40 cents cash is offered.

Frank E. Miller.

Flathead

Most of the week ending November 10 was spent on the tuberculosis campaign work mapping territory, lining up work and accompanying the veterinarian on initial trips into new territory to acquaint him with the farmers and routes. The Moiese Valley was completed and one reactor cow found in about 750.

Arrangements were made in several communities for meetings the second week in December when a Federal and State man will be in the valley to conduct dairy schools, etc.

Livestock surveys were made of farmers visited when on the tuberculosis work.

Two farm bureau meetings were attended where illustrated talks were given on tuberculosis and the campaign in each locality discussed and explained.

A 320 word press article was prepared and distributed.

Farm calls and consultation matters included blackleg, sick hogs, contagious abortion and other subjects.

L. B. Miller.

North Platte

During the week ending November 10 some time was spent in checking up the hog cholera situation in the valley. No new cases have been reported now for several weeks, but quite a few farmers are vaccinating for protection. Cases of sickness reported this week were found to be ailments other than cholera.

Considerable time is required each week in getting club reports together and grading them. Every effort is being made to get 100 per cent finished up. The collection of the calf club reports will finish the work for this year.

North Platte (continued)

During the week ending November 3 the herd of 225 hogs at the Experiment Farm were immunized. M. L. Kiesel, the leading Poland China breeder of the Valley, had his herd of 130 head immunized. Three other herds were vaccinated. Cholera seems to be pretty well under control all over the Valley now. The better breeders are immunizing for protection, most of them for the first time.

Some time was spent getting final reports from pig club members. While it has taken some time to get these stories and reports, prospects are good for finishing up 100 per cent.

The week closed with a poultry culling demonstration at M. L. Kiesel's farm east of Mitchell.

D. H. Propps.

Shoshone

Fair weather prevailed throughout the week ending November 10 so that growers were able to lift the remainder of the beet crop, but about 150 acres are still in piles in the fields, a large part of which is yet to be topped.

About 60,000 pounds of dressed turkeys make up the shipments for the Thanksgiving market from the Shoshone Project, and practically all are being handled by the Big Horn Cooperative Marketing Association. The December shipment is expected to be somewhat smaller. The agriculturist was occupied most of the week giving assistance relative to feeding and dressing problems.

A collective shipment of cattle has been postponed until November 26 due to the fear that the market will not be good at Thanksgiving time. Hay is selling at \$14 per ton on track baled. Butterfat continued at 43 cents per pound.

G. A. Wright.

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W E E K L Y R E P O R T S

Of the Offices of

WESTERN IRRIGATION AGRICULTURE

And

DEMONSTRATIONS ON RECLAMATION PROJECTS

Vol. XXIII

November 17, 1923.

20

Western Irrigation Agriculture

Huntley

Mr. Hansen reports for the week ending November 17 as follows:

With nearly a month of favorable weather following the heavy rains of September and the first part of October the beet harvest is almost completed. In an effort to get all of the beets out of the ground before freezing weather set in the beets were topped faster than they could be hauled to loading stations and were left in small piles in the fields. As a result some losses have occurred due to freezing and shrinkage. Due to the unfavorable conditions of harvest the cost of hand labor for topping advanced to \$11.50 to \$16.00 per acre, the original contract price being \$9.50 per acre. In cases where the farmer advanced the price by \$1.00 or more per acre the Sugar Company also paid \$1.00 per acre to the hand labor. The price of \$16.00 was reached on some of the heavier soils.

Yields of beets are reported to be much better than usual and the average for the district will probably be from two to four tons per acre higher than the average of former seasons. This increase in yield is due largely to the unusually long and favorable growing season. At the experiment station the average yield of 19 plats in the irrigated rotations was 19.05 tons per acre, with a maximum yield of 26.14 tons and a minimum yield of 12.09 tons.

Field work at the station consisted of harvesting beets and plowing.

Director F. B. Linfield of the Montana Experiment Station was a visitor on November 17.

Dan Hansen.

Huntley (continued)

HUNTLEY EXPERIMENT FARM

Yields of Sugar Beets-Irrigated Rotations, 1923.

Plat Number	Rotation Number	Yield		Stand Plants per Acre
		Plat Pounds	Acre Tons	
K-III-1	61	13074	26.148	19628
K-V-13	21	12863	25.726	18648
K-II-1	67	12711	25.422	20552
L-IV-8	35	12295	24.590	15936
K-III-13	31	11529	23.058	20776
L-IV-17	64	11154	22.308	16056
K-III-7	60	10206	20.412	19880
K-IV-1	40	10085	20.160	19040
K-V-5	20	9963	19.926	15288
K-IV-18	32	9834	19.668	18956
L-IV-4	34	9451	18.902	14616
K-IV-7	42	9225	18.450	20356
L-IV-10	46	8698	17.396	14496
K-V-22	2cc	7173	14.346	15708
L-IV-5	2Acc	6993	13.936	13056
K-V-15	23	6853	13.706	19656
K-V-3	18	6692	13.384	14672
K-IV-15	30	6210	12.420	19012
K-V-7	22	6045	12.090	15568

Huntley (continued)HUNTLEY EXPERIMENT FARM

Yields of Alfalfa - Third Crop - Irrigated Rotations, 1923.

Plat Number	: Rotation : Number	: Year	Y I E L D	
			: Plat, lbs.	: Acre, tons.
K-IV- 2	: 40	: 1	: 440	: .88
3	: 40	: 2	: 510	: 1.02
8	; 42	: 1	: 340	: .68
9	; 42	: 2	: 510	: 1.02
12	: 44	: 1	: 400	: .80
13	: 44	: 2	: 500	: 1.00
L-IV-12	: 46	: 1	: 370	: .74
11	: 46	: 2	: 440	: .88
15	: 64	: 1	: 410	: .82
20	: 64	: 2	: 450	: .90
19	: 64	: 3	: 500	: 1.00
22	: 69	: 1	: 430	: .86
27	: 69	: 2	: 520	: 1.04
K-III-8	: 60	: 1	: 430	: .86
9	: 60	: 2	: 480	: .96
10	: 60	: 3	: 530	: 1.06
K-III-2	: 61	: 1	: 530	: 1.06
3	: 61	: 2	: 560	: 1.12
4	: 61	: 3	: 530	: 1.06
K-II -2	: 67	: 1	: 500	: 1.00
3	: 67	: 2	: 470	: .94
K-IV-22	: 8 (cc)	: 12	: 520	: 1.04
L-IV-14	: 8a (cc)	: 8	: 510	: 1.02
	:	:	:	:

Huntley (continued)HUNTLEY EXPERIMENT FARM

Yields of Potatoes -- Irrigated Rotations - 1923.

Plat Number	: Rotation : Number	Yield		: Per cent : Marketable : Tubers
		: Plat-lbs.	: Acre-Bu.	
L-IV - 6	: 35	: 5130	: 342.0	: 89.1
K-III- 5	: 61	: 4815	: 321.0	: 89.3
K-IV - 5	: 25	: 4552	: 303.5	: 90.1
K-III-11	: 60	: 3950	: 263.3	: 83.4
K-IV- 4	: 40	: 3659	: 243.9	: 80.6
L-IV - 2	: 34	: 3530	: 235.3	: 86.4
K-III-14	: 31	: 3180	: 212.0	: 75.5
L-IV -18	: 64	: 3180	: 212.0	: 89.3
L-IV - 9	: 4a-cc	: 3000	: 200.0	: 85.4
K-V - 6	: 20	: 2870	: 191.3	: 78.8
K-V -14	: 21	: 2695	: 179.7	: 81.3
K-IV -16	: 30	: 2615	: 174.3	: 77.6
K-IV -21	: 4-cc	: 2570	: 171.3	: 80.3
K-IV -12	: 26	: 2230	: 148.7	: 83.0
K-IV -14	: 44	: 2170	: 144.7	: 79.3
K- V -10	: 24	: 1975	: 131.7	: 85.8
K- V -19	: 27	: 1865	: 124.3	: 76.9
	:	:	:	:

Dan Hansen.

San Antonio

During the two weeks ending November 17 the following meteorological data were recorded: Maximum temperature 75, minimum 37, greatest daily range 29, and precipitation 2.94 inches. Six days were clear, two were partly cloudy, and six were cloudy. The precipitation came in the form of a slow soaking rain extending from November 11 to 17, inclusive. Conditions were favorable for field operations during the first ten days of the period but no outside work could be done the last four days.

The third crop of sorgo planted in 4.1 foot rows was harvested from the rotation plats November 5.

Texas Red Rustproof oats were seeded on 16 rotation plats November 9 and 10. McAdoo field peas were planted on 6 rotation plats November 13; only .04 inch of rain having fallen previous to making this planting.

Other station work included manuring, plowing, disking and harrowing rotation plats; cutting cotton stalks; grubbing dead trees from orchards; making soil moisture determinations; ginning cotton picked from root-rot plants, and from rogued plats to be saved for seed; shelling corn; and repairing the electric wiring of the farm buildings.

Geo. T. Ratliffe.

Demonstrations on Reclamation Projects.Belle Fourche

For the week ending November 17 three days were spent in the field obtaining data for the livestock census, visiting schools on club work, and inspecting hogs in one locality where cholera is present in a mild form. Vaccine was ordered and all suckling pigs will be vaccinated.

Two trips were made to Two Top with Dr. Heacock where the Erickson Brother's sheep are to be dipped for the last time for sheep scab. One day was spent on the project with H. D. McCullough of Brookings on farm management problems with club members and farmers. The sale of boars and gilts of club members has been put off as the market is dull and prices low. About \$15 has been the average of club sales in various communities. The two Gladden boys, who are club members, combined the best of their two litters and exhibited the stock in the feeder pig contest under the name of their father, W. H. Gladden, taking first prize of \$100. Other prizes won by these boys at the County Fair brought the total to \$128.

Local prices paid for produce are as follows:

Ducks and geese.....	9¢ per pound
Poultry	7¢-11¢ " "
Turkeys	21¢-25¢ " "
Eggs	35¢ per dozen
Butterfat	47¢ per pound

Frank E. Miller.

Flathead

Nearly four days of the week ending November 17 were occupied in mapping regions to be tested soon and in making farm calls and laying out a route for the veterinarian for the coming week. Dr. Clark reported Thursday to assist in the testing. Dr. McDonald returned Wednesday after a six day leave. Work for the coming week has been planned and farmers notified.

A supply of aggrassin was received Saturday and numerous calls for it have come in. Arrangements have been made with drug stores to handle it now, although they would not handle it before.

L. B. Miller.

Newlands

For the week ending October 27 Mr. Cline reports as follows:

Some interesting experiences in connection with the finishing of turkeys on the project, for market, have occurred recently. Three flocks of turkeys ranging in size from a few hundred up to fourteen hundred in number, while being finished, developed severe symptoms of black head. The difficulty seemed to involve the entire flock in each case. The turkeys refused to eat and showed the usual diarrhea characteristic of the black head invasion together with the dark coloring of the head and wattles. The outbreak seemed very discouraging to the owners in view of the fact that market-time is so close at hand. The owners predicted a heavy loss at once.

Newlands (continued)

After a thorough sizing up of the situation a thorough course of medication was prescribed. The following treatment was carried out; black pepper, powdered gentian and powdered ginger, were given in a small amount of bran mash in quantities, the same as would be given for cattle, 1 ounce for 250 pounds live weight. These powdered drugs were mixed with just sufficient wet bran mash so that each turkey would get his dose of medicine. This was fed the first thing in the morning, and other feed was kept away for two or three hours, after which a regular feed was given to any that would eat. Instead of the evening feed the turkeys were dosed with a solution of sulpho carbolate compound tablets and bichloride of mercury tablets mixed with bran. For this purpose four twenty-five grain sulpho carbolate tablets were used to each gallon of water to which was also added one part of bichloride of mercury to ten thousand parts of water. This treatment after being continued, two days straightened the turkey flocks out and got them back on their feet.

There is great danger of severe outbreaks of black head in an infected flock of turkeys, when they are confined or fed in close quarters. Under these conditions, they pick up large amounts of infection from the ground and the disease develops very suddenly. When turkeys must be corral fed it is very important that their feed does not get contaminated and that all feed is kept off the ground, where it does not get a chance to be contaminated, from the droppings and the feet of the turkeys. This method of combatting sudden outbreaks as described, has proven very effective on the Newlands project. During the past week one registered Holstein bull was selected for a dairyman.

One day was spent at the State University at Reno, judging the state dairy cattle exhibit in connection with the annual home coming week and agricultural display.

Four days during the week ending November 3 were spent away from the project on a trip to Oakland, Berkeley, and Oakdale, California. Two days were spent in Oakland attending the Pacific Slope Dairy Show, together with the various meetings of dairymen and manufacturers. The exhibits and displays along dairy lines were very interesting and helpful, and quite necessary to keep field men in close touch with development along these lines. At Oakland and at Oakdale, visits were made to creamery concerns, which buy a large amount of the butterfat produced on the project. These creameries report that a very excellent quality of product has been coming from the Newlands project dairymen and are very hopeful about the future dairy development here. It is interesting to note that these California concerns pay a price to our dairymen, which is practically the same as is paid the California dairymen adjacent to their creamery. This shows a very encouraging condition in the butter market. These firms are reaching out for our product. three or four hundred miles away.

Dairymen in the localities, visited are feeding alfalfa hay at an average price of \$15.00 in the stack, which is almost double the price of hay on the Newland's project, yet our product brings practically the same net price as the

Newlands (continued)

California dairyman's product. This situation places the local dairyman to considerable advantage.

The Newlands Project Herd Testing Association is operating under the same plan as last year and with the same tester. New members will be accomodated next month where it is expected that the association will be accomodating all the herds that one man can handle. Fifteen cents per test will be charged this year.

There has been an unusual number of miscellaneous requests for assistance during the week ending November 10. Cooperative marketing, milk fever, sterility, abortion, cattle selection and items of general herd management have required a great deal of attention.

A delegation from the Fernley bench came to Fallon in search of dairy cows and were referred to some places where they might secure a few animals. There is a constant demand for good dairy cattle. It is difficult to keep this demand supplied locally and our farmers are not inclined to import from our nearest source, California, because of the great danger of introducing tuberculosis.

The dairymen of this locality are especially favored at this time with good markets. Just at this time eight separate buyers are bidding for local cream. This includes the Northern California Milk Producers Association, which has just recently entered the field. Local prices average net at Fallon about one cent above top, San Francisco quotations. At this time this means 54 cents for cream at Fallon. This keen competition has helped to stimulate interest in dairying here. The buyers are doing all they can to increase their trade. This helps greatly to keep the idea before the public. An article was contributed to the local paper on the subject of control of Blackhead disease at the finishing period of turkeys.

Much of the time during the week ending November 17 has been devoted to helping in the selection of dairy cattle and work in connection with the completion of the past year's herd testing records. It has been a surprise to observe the stress put on testing association records by people who are looking for dairy stock. In a great many cases the lack of a record spoils the sale. In some cases special tests are required in the absence of association records before transfers are made.

The preparation for market of the project turkey crop has been one of the principal activities. Methods and places of marketing have also been subjects requiring much attention. San Francisco bay market prices have dropped from a previous price of 40¢ to 35¢ for prime young gobblers dressed weight. This means net to the grower at Fallon 28¢ to 30¢ per pound.

A great many of the growers anticipated a 40¢ market and unless the market advances some the Thanksgiving shipments will probably be curtailed to some extent in the hope of securing a better market later.

L. E. Cline.

North Platte

All pig and calf club work for the year was completed and reports forwarded to the Lincoln office during the week ending November 17. Every member finished and filed a final report making a 100 per cent completion. Gilts are now being bred for the sow and litter clubs and there is already a demand for first year clubs again next year.

Two herds of pure bred hogs were immunized. Cholera was found in one herd near Scottsbluff. Two hogs had died. The rest of the herd was given the double treatment.

A trip was made to Goshen county, Wyoming, the last of the week to select a Holstein bull for Chas. C. Paules of Fort Laramie. Mr. Paules is anxious to build up his herd and requested assistance in selecting a herd sire. A very good bull was selected at Hawk Springs, 25 miles south of Torrington. The bull was shipped from Wisconsin two years ago and was sired by the sire of King Segis Pontiac Count.

D. H. Propps.

Shoshone

Two matters, chiefly, received attention during the week ending November 17. Two days were spent with Mr. Mosley, herdsman at the Huntley Experiment Farm, visiting dairymen who were desirous of securing the use of a government owned Holstein bull. Before Mr. Mosley left it was understood that two animals would be sent to Powell as soon as convenient, one to be used by Mr. J. L. Werts, Powell; the other to be kept at the farm of Thos. Williams and used also by Messrs Anderson, McPherson and Gould, all of Powell.

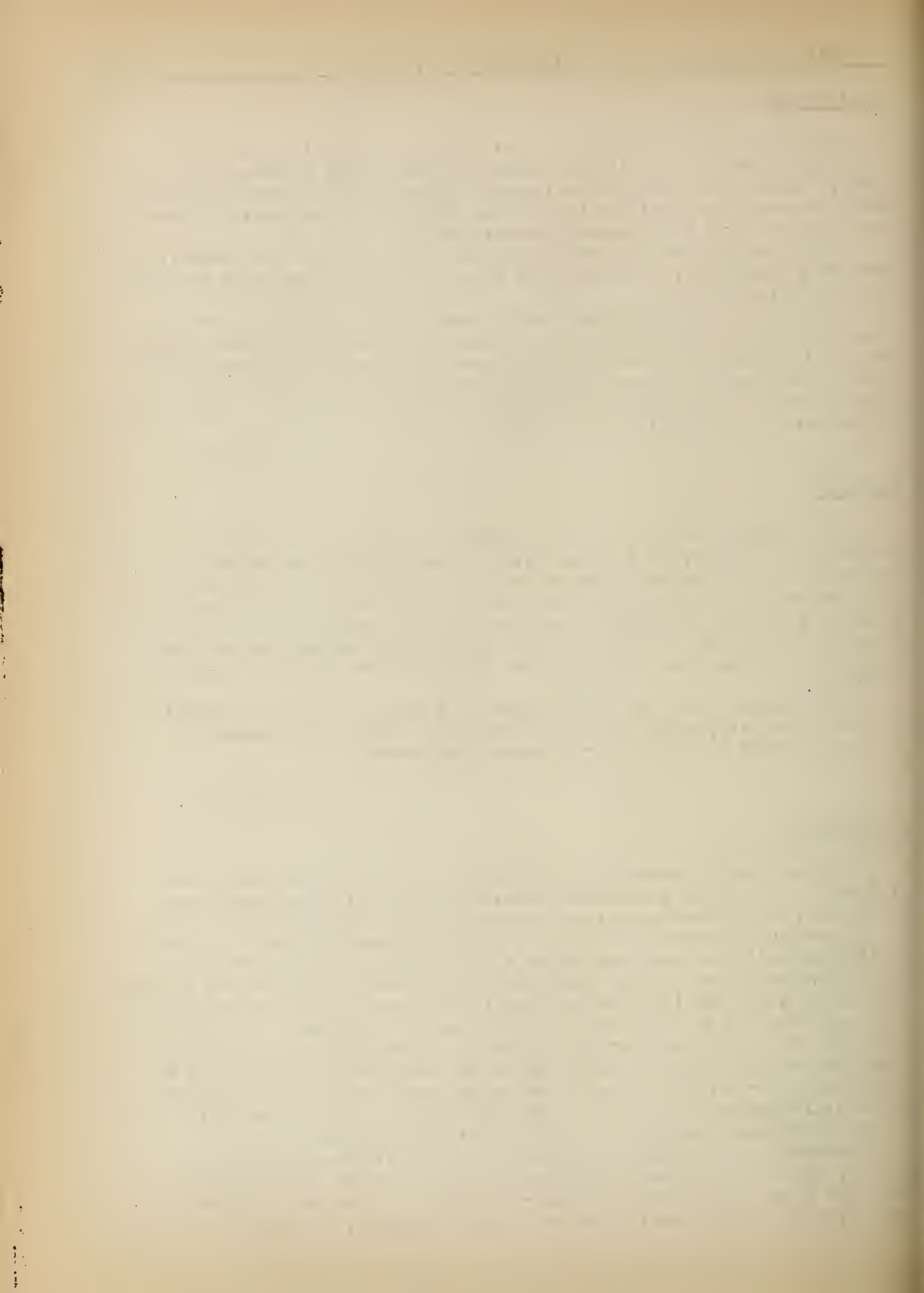
Conferences with farmers and visits to farms occasioned by requests for assistance in judging as to the fitness of cattle for shipment to the Omaha market consumed the remainder of the week.

G. A. Wright.

Uncompahgre

The week ending November 3 was taken up with travel and conferences at Denver, attended by request of members of the local Water Users Board of Directors. Two days were taken for meetings of delegates from most of the government reclamation projects, at which reports were given of general conditions on the projects and action taken to assist the Fact Finding Commission in securing data. On Wednesday a meeting of farmers and bankers with officials of the Intermediate Credit Banks and Federal Land Banks was attended, at which the operation of these banks was discussed. The results of this meeting were somewhat disappointing, as the Intermediate Credit Banks Act had been looked upon by many as an emergency measure that might be looked to for relief by men who are being forced to liquidate. However, it was explained that this was not the intent of the law and but little encouragement was given the men most in need of immediate help.

Conferences were held with Dr. W. E. Howe of the Bureau of Animal Industry and Dr. C. G. Lamb, State Veterinarian relative to tuberculin test work to be done on the Uncompahgre project. On account of storms that have seriously delayed testing in the Boulder district, work here will not



Uncomphare (continued)

be begun until late in November.

The Burlington Railroad in cooperation with the Extension Office of the Agricultural College and livestock breeders of the state, recently conducted a tour of Eastern Colorado on which purebred bulls and boars, donated by breeders were exchanged even for scrubs actually in service, the scrubs to be slaughtered and their proceeds to be divided among the men contributing the purebreds. These "scrubs" were sold on the Denver market this week--28 bulls bringing, at 2¢ a pound \$501.00 and 29 boars, at 1 $\frac{1}{4}$ ¢ a pound bringing \$88.00. A very few of the individuals were fairly good animals--better in fact than the average of those in service on farms and ranges of the western slope of Colorado, at least, but the majority were poor enough and the poorest were impossible. The Denver and Rio Grande Western Railroad was invited to cooperate in a similar undertaking but was unable to do so.

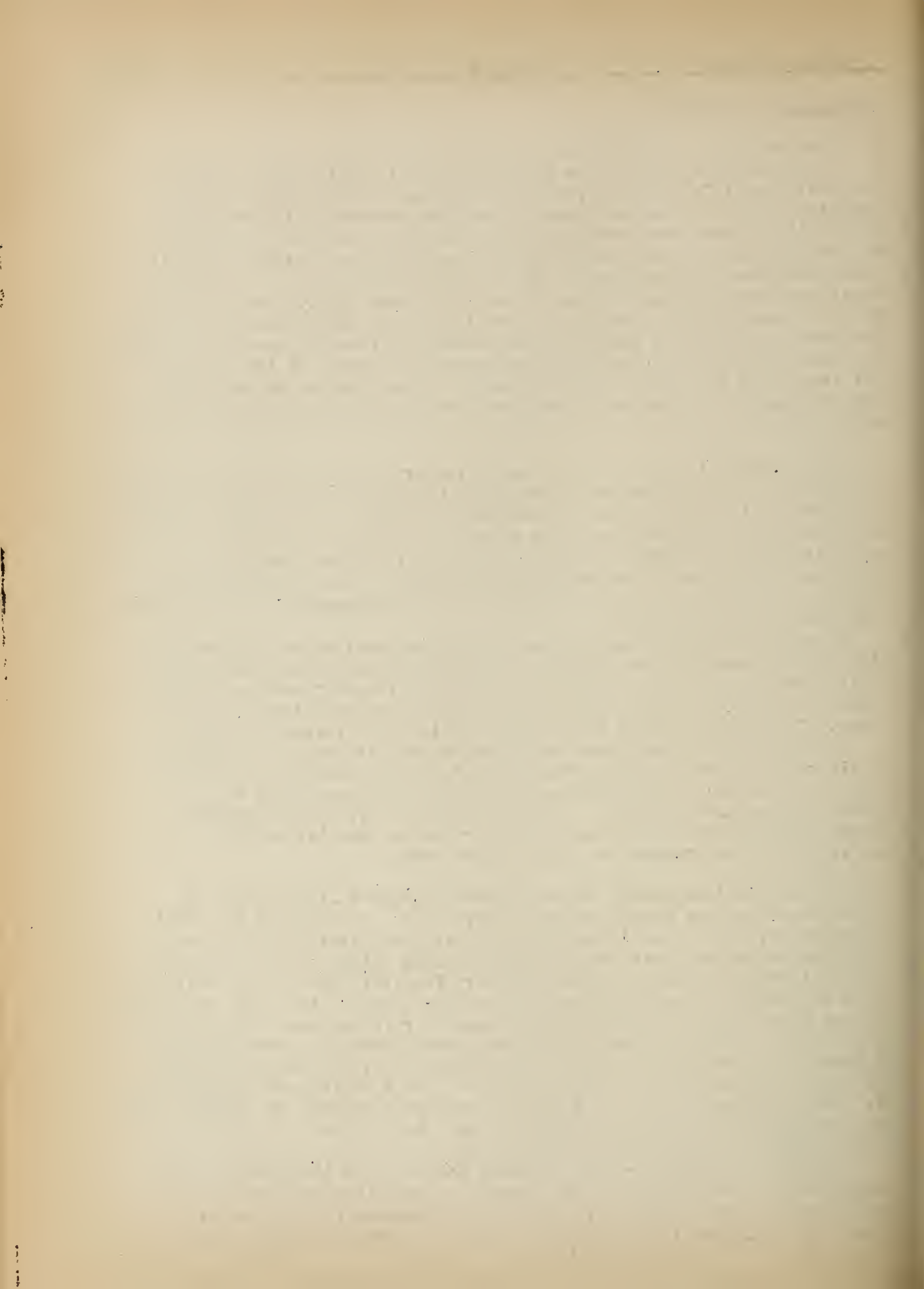
The first half of the week ending November 10 was spent at Ft. Collins, in attendance at a conference of Extension Directors and specialists from 12 western states, held at the agricultural college. The program consisted of discussions of extension work as related to nutrition, dairying, and the use of the range by cattle and sheep. A general program covering these subjects was adopted for the years 1924-30 inclusive. Steps were also taken toward the preparation of a hand book for extension workers. The conference ended with a tour on Friday.

On Saturday County Agent McMann from Grand Junction visited Montrose with the Mesa County stock judging team which won the state contest at Pueblo. This team is to be sent to the Chicago International to compete in stock judging, and come to Montrose for practice in judging sheep and horses. The farms of Allen Nash and Mr. Faris were visited with them.

A meeting of the Executive Committee of the Farm Bureau to arrange for the regular annual meeting was attended, also a meeting of turkey raisers, the latter meeting having been called by County Agent King to discuss cooperative marketing. A good number, mostly women, attended this meeting and interest shown promises results. Another meeting to hear reports of committees was set for next week.

Most of the time during the week ending November 17 was spent in locating cows for men wishing to buy dairy stock. On a report from Delta that there were some good Jerseys for sale in that district a trip was made there on Thursday and several herds visited but while some cows were found that could be bought, there were very few that were at all desirable. Prices for only fair cows ran from \$70 to \$100 a head. At a sale of dairy stock on Wednesday near Montrose the average for fairly good cows was about \$55 per head. These cows have had fairly good records of production and had been tested for tuberculosis. A three-year old, registered Holstein bull from A. R. O. stock on both sides, and a good individual brought only \$45. These prices indicate that men who have cows to sell are holding them for good money if they are not forced to sell but the men who want to buy are demanding low prices if they buy at all.

A meeting of turkey growers was held this week in the Court House to discuss cooperative shipping. The manager of the Olathe Cooperative Shipping Association who handled a large number of turkeys last season was present and explained the Association's idea of what they could expect to



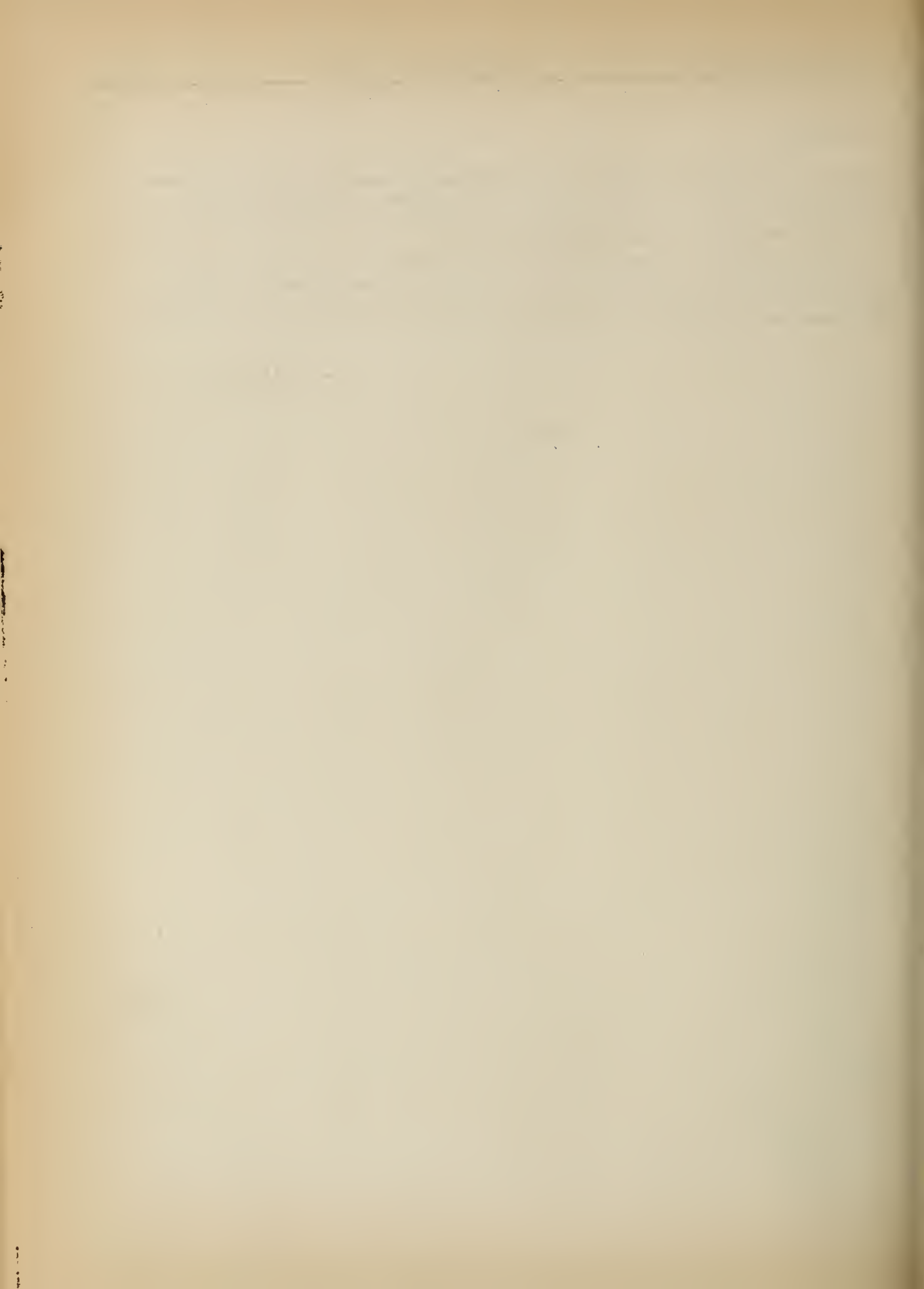
Uncompahgre

receive of the present market, top price being given as 28¢ net for dressed (dry picked) birds. A few of the growers decided to ship with the Association but the majority thought the price too low and agreed to attempt a carload shipment for the Christmas market.

H. A. Lindgren, formerly agriculturist on the Uncompahgre visited Montrose the first of the week. Mr. Lindgren is now Extension Animal Husbandman for Oregon and had been attending the conference of Extension Directors and Specialists at Ft. Collins.

H. A. Ireland.

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WEEKLY REPORTS

Of the Offices of

WESTERN IRRIGATION AGRICULTURE And DEMONSTRATIONS ON RECLAMATION PROJECTS

Vol. XXIII

November 24, 1923.

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Western Irrigation Agriculture

Newlands

For the period November 19 to December 3 Mr. Knight reports as follows:

"The meteorological data recorded at this station for this period follows: Mean maximum 53.6; maximum 68 on the 23rd of November; mean minimum 20.7; minimum 10 on the 2nd of December. Rainfall was .07 on December 30th.

The general fall farm work has been continued throughout this period. The plowing on fields H and F has been completed. Gypsum has been applied at the rate of 1,000 pounds per acre on Field E. The irrigation ditches are now being cleaned of weeds and the worn out boxes replaced with new ones."

E. W. Knight.

Scottsbluff

The average maximum temperature for the week ending November 24 was 57 with a maximum of 67 on the 24th; the average minimum was 26 with a minimum of 17 on the 23rd. No precipitation was recorded during the week.

The last one on the three silos was filled with beet top silage during the week. The silo was about half filled with corn ensilage and the beet tops on top of that. Some additional work was done on the dairy barn and the poultry plant. The lambs for the experimental work are at the farm and will be placed on feed soon. At the time these were purchased, 44 head of old ewes were bought. These will be lambd out and used in sweet clover pasture tests next summer.

The average maximum for the week ending December 1 was 46 with a maximum of 53 on the 29th and 30th; the average minimum temperature was 21 with a minimum of 18 on December 1.

The Central Nebraska Cooperative Potato Growers' Association, with headquarters at Kearney, Nebraska, have been operating in the Valley for some time. A meeting was held recently at Mitchell at which time they secured about 50 cars. Later, they held a meeting on Dutch Flats at which time a number of the growers in that section joined the Association and there were signed up with the Association about 150 cars. Returns have been received from some of the shipments, the growers receiving 90¢ per cwt. which is 10¢ above the price offered by buyers.

The siloed beets are practically all in and some of the factories will probably close within the next 15 days.

The work on the farm has consisted of miscellaneous jobs of preparing for winter, storing feed and getting the pens ready for the experimental lambs.

James A. Holden.

Demonstrations on Reclamation ProjectsBelle Fourche

Three farm management clubs consisting of 36 members were organized at Horsecreek, Vale, and Newell schools during the week ending November 24. Each member of this club keeps an accurate record of their farm's business for one year. Girls' clubs that take up sewing, canning, and cooking were formed at Vale, Newell, E. Highland, and Empire schools. Ninety-three members of girls' clubs are organized to date. One first year poultry club and one second year poultry club is now in active operation. Sheep clubs, other poultry clubs, pig clubs, and possibly a dairy club will be formed later after the first of the year.

Farm records giving the complete business for one were obtained from six farms.

On Saturday a trip was made to Sturgis to attend a poultry school conducted by Miss Sutter from the State Extension force. Three cars and 16 interested people from the project attended the school obtaining valuable information on the feeding, culling, killing and marketing of poultry.

For the week ending December 1, butterfat tests were run for five dairymen. At two of these farms, demonstrations were given to show as far as possible the relation between dairy type and performance. Vaccine was ordered for two farmers and one cholera vaccination demonstration conducted. Due to the slump in the feeder-pig market many farmers have not bred their sows for fall litters and only the best of the spring gilts and old sows have been saved for breeding purposes. The number of brood sows will be about the same as a year ago.

Bailed alfalfa hay is being shipped to Eastern points in small quantities at from \$12 to \$15 per ton. Butterfat is quoted at 46¢ per pound and eggs at 42¢ per dozen.

Frank E. Miller.

Flathead

A trip was made to Missoula Tuesday and Wednesday of the week ending November 24 to attend and participate in the meeting of the Montana Drainage and Irrigation Institute, presenting "The What and Why of the Flathead Project Farmers" at this meeting. A conference with Director of Extension, Professor Cooley of Bozemen was also attended.

Several days were devoted to various phases of the tuberculosis campaign including the securing of a car from the Reclamation Service on a rental basis for use by the veterinarian and mapping further territory. Two more reactor cows were found this week, making a total of three cows out of 2,000 tested to date. The attitude of the farmers to this testing is exceptionally favorable, according to the veterinarians.

Milk samples were tested. Numerous inquiries about blackleg and vaccines received attention.

L. B. Miller.

North Platte

During the week ending November 24 a bull club was organized in the community just east of the experiment farm. The seven men who signed the agreement own a total of about 50 cows. A 2-year old Holstein bull out of a 26-pound cow will be placed in this club the first of next week.

Vaccinating demonstrations were given at four different farms. The herds were immunized. No cholera was reported this week.

A culling demonstration was given at John Hanlon's on Dutch Flats.

Part of the week ending December 1 was taken up with bull club work. A 2-year old bull--experiment farm breeding--out of a 26-pound cow was placed in the Banner Club just east of the experiment farm. The members of the club are quite well pleased with the bull. They will use him on about 60 cows. A visit was made among the Dutch Flats and Sheep Creek club members in regard to care of the bulls, renewing agreements for another year and keeping production records of cows. Members of each club were well pleased and agreements were renewed.

Two grade Holstein heifers out of the recent shipment from Wisconsin were selected for Mr. Wright of the Mitchell State Bank. About 25 of the heifers are still unsold. There are some fairly good individuals among them but they will not freshen till late next spring and the price is now above \$100 a head.

Two vaccinating demonstrations were given near Morrill. No cholera breaks have been reported for some time.

One of the farmers who is feeding lambs has been having considerable losses. Some time was spent about his yards in an effort to locate the cause. The trouble evidently originated from feeding mouldy alfalfa. He is being given assistance in getting the lambs straightened up again.

Mr. Lynn, a farmer near Torrington, Wyoming, drove to the farm Saturday and assistance was given him in locating and selecting two Duroc boars to use in his herd. The boars were selected from Geo. L. Eastwood's herd on Dutch Flats.

D. H. Propps.

Shoshone

Monday and Tuesday of the week ending November 24 were used by a trip to look at 4 herds of dairy cattle for sale near Billings in company with Mr. E. H. Loomis, a dairyman of Powell. No cattle were purchased, Mr. Loomis deciding in the end that cows of as good quality as the ones looked at can be bought nearer home at lower prices.

The two Government owned bulls arrived from Huntley, Thursday and the six farmers who are to use them were supplied with blank agreements covering the project and also with milk sheets, the use of both being carefully explained.

One flock of 100 hens was culled in order to eliminate overcrowding in the poultry house. The remainder of the week was given to miscellaneous work, the larger part of which related to a collective shipment of cattle to occur November 26.

G. A. Wright.

W E E K L Y R E P O R T S

Of the Offices of

WESTERN IRRIGATION AGRICULTURE And DEMONSTRATIONS ON RECLAMATION PROJECTS

Vol. XXIII

December 1, 1923.

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Demonstrations on Reclamation Projects

Flathead

In the tuberculin testing work the fourth reactor was found during the week ending December 1 among the 2,500 head tested. Thirty-two days have been used by the veterinarians so far in the test. The spirit of the farmers regarding the test and the slaughter of their condemned animals is most desirable and to be commended according to the men doing the work. The educational campaign preceding and during the test is credited by the veterinarians for this condition to a large extent.

Considerable time was devoted to advertising the coming Dairy Week and to making necessary arrangements. Circular letters were prepared and pamphlets on Cow Testing Associations enclosed.

The Beekeepers meeting at Missoula was attended during the week.

Farm visits were made to assist in cases of sheep that were sick, blout of cow, disinfecting, etc.

L. B. Miller.

Minidoka

The principal part of the work during the week ending December 1 was devoted to Cow Testing Association matters. It seems from a study and consultation with various dairy interests and dairymen themselves that it will be possible to organize a project-wide Cow Testing Association in which the farmer will take his own milk samples and mail them to a central point for testing. It does not seem that enough farmers feel sufficiently prosperous to assume the expense of the regular Cow Testing Association work.

The potato crop reports show a low yield at a low price. The beet crop was excellent with a predicted yield of slightly more than twelve tons per acre. Hog prices are discouraging. Farmers receive about five cents a pound for hogs. Not many stocker pigs are for sale and no buyers. Cheese factories are paying fifty-two cents for butter fat. Farmers are generally satisfied with cheese factory returns.

J. T. Montgomery.

Newlands

During the week ending November 24 the principal activity among the farmers has been the marketing of the turkey crop. More turkeys have been raised on the project this year than for any previous year. Such has been the report also from many other districts which sell to the Pacific Coast markets. Two weeks ago the San Francisco market for dressed turkeys was 46¢ to 42¢ and a number of the growers were far sighted enough to ship at that

Newlands (continued)

time. The market during the past week has declined considerably until 33¢ to 35¢ has been the top for prime birds. Indications are that the market will be overstocked resulting in an even lower price. The bulk of the turkeys are shipped on consignment to San Francisco commission houses. The marketing expense for dressed turkeys amounts to approximately 5¢ per pound. This includes transportation, commission and shrinkage.

It is expected that the bulk of the project turkeys will be marketed for the Christmas and New Year's trade.

Local butterfat prices suffered a slight decline during the week. The Fallon price was 50¢ per pound. Local competition has kept the butterfat price at a high level during the fall months. The Fallon price is maintained at an average of about one cent above San Francisco quotations for extras.

During the week ending December 1, a representative from the Dairyman's Feed and Supply Company of Los Angeles was buying alfalfa hay on the project. His activities here caused the local market to advance from \$13 to \$14.50 per ton f.o.b. cars. The demand for hay has been very satisfactory recently. A large part of the hay for sale has already been contracted for.

The local express company reports that 100,000 pounds of dressed turkeys were shipped from the project up to Thanksgiving Day. The heaviest shipment before this year was 70,000 pounds made in 1917. The market declined to less than 30¢ in San Francisco for good stock, and poorly fattened stock was very poor sale. On the final day for dressing turkeys here, many of the growers found the turkeys unready for sale. This resulted in the withholding of at least half of the crop to be marketed later.

On Saturday of this week representatives from the Northern California Milk Producers' Association, with headquarters at Sacramento, held a mass meeting of dairymen at Fallon for the purpose of soliciting cream shipments to their organization, and also with the hope of interesting local dairymen in their organization. The prices paid by all outside concerns are much the same. This week's Fallon price has been 53¢ per pound. The keen competition for local product serves as a stimulus to production. Word has recently been received from the State Quarantine Office that practically all the states drawing on Kansas City for their alfalfa supply have placed a quarantine on Nevada hay coming from districts now known to be infested with alfalfa weevil. Up to the present time this does not affect the Newlands project except the Fernley district lying in Lyon County. The placing of this quarantine by eastern states has been a severe blow to the Fernley district of this project, as they were depending on the Kansas City market to furnish an outlet for this year's crop. A number of the dairymen from the Fernley district have recently made inquiries from here about entering into the dairy business. It is expected that this will be the next move among the alfalfa growers on the Fernley bench.

L. E. Cline.

Shoshone

On Monday of the week ending December 1 a collective shipment of cattle, 34 head, were assembled and consigned to Martin Brothers and Company, Omaha. Also three carloads of horses were shipped collectively at the same time. The horses were not needed on the project and getting rid of them will materially reduce the consumption of hay.

Shoshone (continued)

The Cooperative Marketing Association announced during the week that only one bid for Christmas turkeys had been received. That was from Swift & Company and it will enable the Association to pay 22¢ per pound for dressed #1 birds and 19¢ per pound for #2. This is a drop of 9¢ under the price paid for Thanksgiving turkeys. Producers are being encouraged to dress their own birds so as to increase the returns.

Butterfat dropped from 43¢ to 41¢ a pound and #1 baled hay from \$14 to \$13 per ton at Powell. Another shipment of cattle, and miscellaneous livestock work occupied the remaining part of the week.

G. A. Wright.

Uncompahere

Most of the week ending December 1 has been given to assisting men wishing to buy dairy stock. Trips were made to the "North Fork" valley above Delta and to Grand Junction. Some good stock was found in both places, but prices on desirable cows were rather high, ranging from \$70 for fairly good grades to \$500 for the best purebreds. Nine men made the trip to Grand Junction and some of them will probably buy a few cows. Two bulls were secured under the free-lease plan of the Mesa County Jersey Club.

Parts of two days were spent on work connected with the tuberculosis-control campaign. A purebred Duroc-Jersey gilt belonging to a member of the Delta County Pig Club was transferred to a farmer at Montrose. Two calls were made regarding poultry breeding stock.

H. A. Ireland.

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Western Irrigation Agriculture

Scottsbluff

The average maximum temperature for the week ending December 8 was 45 with a maximum of 47 on the 2nd and the 6th; the average minimum was 19 with a minimum of 13 on the 5th.

During the week the experimental lambs were weighed up and placed in the pens. There were 13 lots of 25 each and they will be fed the following rations, in addition to all the hay they will eat.

1. Corn
2. Barley
3. Dried Pulp
4. Corn and cottonseed cake.
5. Barley and cottonseed cake.
6. Dried pulp and cottonseed cake.
7. Corn and oil meal.
8. Barley and oil meal.
9. Dried pulp and oil meal.
10. Corn, corn silage and cottonseed cake.
11. Corn, beet top silage and cottonseed cake.
12. Corn, beet tops and cottonseed cake.
13. Corn, potatoes and cottonseed cake.

The hogs to be used in experiments were divided up and weighed and will be started on test soon. The breeding flock of ewes were weighed up and placed in winter quarters.

The balance of the pasture plats in Fields C and D were also manured.

James.A. Holden.

Demonstrations on Reclamation Projects.

Belle Fourche

During the week ending December 8 a demonstration on the vaccination of 68 pigs was given at Iver Anderson's farm with five feeder pig growers present. Eight poultrymen attended a demonstration on the killing, dry picking, and packing of poultry to be shipped to market. One community meeting was attended at Vale with 200 present. The men of the community had entire charge of the meeting, providing a fine program and for refreshments furnished a roast pig.

Belle Fourche (continued)

Milk tests were run for one dairyman and hay to be shipped East was inspected at two places. Considerable time was spent on assembling data for the annual report.

Frank E. Miller.

Flathead

The early part of the week ending December 8 was employed in making weekly and monthly reports, financial statements, vouchers, etc, and in preparing records on the tuberculin work and finances.

A fifth reactor was found during the week. This animal, recently purchased by M. Turnquist, had a generalized case extending to super-mammary gland and udder. Evidently a bad spreader to cows and humans.

Part of the time each week is used in directing the work of the veterinarians and assisting in cases of reactor animals.

About 100 circular letters and pamphlets and some personal letters were sent out to farmers to call their attention to the dairy meetings. Three newspaper articles were sent out and several large posters prepared. The attendance at the meetings which began Friday was very encouraging. The Saturday meetings, first of this series, showed a keen interest in dairy work and the Cow Testing Association. Mr. Murdock and Mr. Tretsven were the chief speakers of the day.

In connection with the Saturday meetings, Mrs. Miller had a Milk and Food exhibit and gave a talk. The state nurse also appeared on the program. These two features were very popular with the men as well as with the women present.

L. B. Miller.

Newlands

During the week ending December 8 one article was contributed to the local press regarding the importance of proper finishing of turkeys for market. Included in this article were results of turkey feeding experiments conducted by this office in 1916. At this time it was found that turkeys on full feed put on gains at the rate of one pound gain for three to four pounds of ground grain, while the turkeys were running on alfalfa pasture. At this rate of gain the finishing period of turkeys is much more profitable than is generally considered.

The growing of rabbits for market is getting to be an industry of considerable importance on the Newlands Project. In a few instances it is the principal industry on small places, it being generally considered a side line, but a very profitable one. The San Francisco market seems to be able to absorb an unlimited quantity at a good price. Twenty cents per pound net at Fallon is the price which generally prevails through nine months of the year. A two and one-half month old rabbit generally brings a net price of 50¢ at home. There is no doubt but that the rabbit industry pays the highest net price for feed consumed of all the live stock industries. Alfalfa hay is the principal feed consumed. The chief handicap to the rabbit industry is a coicidial disease of the intestinal tract and the liver. This disease is very destructive of the young rabbits. The infection is spread through

Newlands (continued)

the faces of the older rabbits contaminating the feed. Some work has recently been done by this office to acquaint rabbit growers with this disease and the method of control. A number of growers had become discouraged by their losses before the difficulty was brought to the attention of this office.

L. E. Cline.

North Platte

Dairy work during the week ending December 8 included the selection of cows for a number of farmers and a Holstein herd sire for J. H. Jackson. A young bull from the experiment farm was exchanged to Mr. Jackson for a 3-year-old bull that will be loaned to a group of farmers.

Three farmers on Sheep Creek who made pit silos this fall are filling them with dry fodder. At their request part of a day was spent with them showing them how to handle it.

A pure bred Hampshire hog sale was attended near Bayard with the view of selecting a pure bred sow or two for sow and litter clubs.

Two cases of sickness among fattening lambs were reported. Hog cholera was found in one herd in Gering Valley and the herd was vaccinated.

A 700-word article was sent out regarding a high-class Holstein herd sire which Barton & Sons of Gering recently purchased from John Erickson at Waupaca, Wisconsin.

Shoshone

A part of several days of the week ending December 8 was given to a survey in four communities of the pure bred livestock situation chiefly in respect to number and breed. The other activities of the week pertained to the grading and marketing of turkeys, one grading demonstration being conducted near Deaver, and to a collective shipment of cattle to occur December 11. Returns from the previous shipment show that yearling beef steers sold in Omaha for \$6.75 per cwt. and fat cows brought from \$3 to \$5 per cwt.

After the cooperative marketing association which handled practically all the Thanksgiving turkeys had announced its price for the Christmas market, the Henningsen Company began offering a cent more for both grades. The Association then released its members and as a result producers living on the project as a rule sold to Henningsen.

G. A. Wright.

Uncompahgre

Three men were assisted during the week ending December 8 in selecting dairy stock, twelve head being transferred. Five of these were purebred or high grade and the rest including one well bred herd bull were Jerseys--mostly purebreds. All of them came from the project.

County Agent King has been supervising a cooperative carload shipment of turkeys and some assistance has been given. The turkey market has been very low and no satisfactory offers have been received so the shipment has

Uncompahare (continued)

not been sold. Arrangements were made to have birds picked in the house of a local poultry dealer who is overseeing dressing, crating and loading for 1½ cents a pound, he to furnish crates. About 65 growers have contributed to the shipment. Many of them have picked their own birds which has resulted in a rather high percentage of No. 2's. The shipment will go out before the middle of next week.

Some time has been given to the poultry show this week, arranging the premium list, etc.

Three meetings have been attended connected with boys' and girls' clubs. Miss Sheridan, State Club Leader, was in for the "Achievement Day" program on Saturday. This is an annual event. On account of a heavy snow only about 100 were present. An all day meeting was held with lunch at noon in the state armory. Two Montrose County canning club girls recently sent exhibits of their work to Wheeling, West Virginia to enter in competition open to women and girls of the United States held annually by the Hazel-Atlas Glass Company. Of \$100.00 cash offered as premiums a 12 year old girl from Montrose won \$37.50--six first prizes and three seconds, and a 14 year old girl won \$15.00--three first prizes. The first girl was county and state champion this year and the second was one of the state championship demonstration team last year and on the state champion cooking team this year.

The first snow fall of any consequence of the season and the first precipitation of any kind for several weeks occurred Friday night and Saturday. The local government weather station showed 20.3 inches at Montrose, while at Delta only 20 miles from Montrose there was hardly enough to cover the ground. The storm did no damage being rather beneficial.

H. A. Ireland.

W E E K L Y R E P O R T S
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And
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Western Irrigation Agriculture

San Antonio

The weather during the four weeks period ending December 15 has consisted principally of fog, mist, and rain. Rainfall, ranging from a trace to 1.57 inches, has been recorded for fifteen out of the twenty-eight days although the total has amounted to only 4.69 inches. Field work has been possible only four days out of the period. The first killing frost of the season occurred the night of December 13, with a minimum of 32 degrees. No serious damage resulted. A summary of the meteorological data recorded follows:

Week ending	Temperatures			Precipitation	
	Max.	Min.	G.D.R.	Inches	No. of days
Nov. 24	80	43	30	.16	3
Dec. 1	80	33	30	1.38	5
Dec. 8	77	57	26	.82	3
Dec. 15	71	32	24	2.33	4

Flax varieties and the first plot in the date-of-seeding flax test were planted on field F3 November 24. Nursery planting of flax varieties was made November 26 on field C3. A satisfactory stand was secured in all cases except the Damont (C.I.3) variety in the nursery planting which is only fair.

Four rotation plats were plowed.

Cotton rogued and picked for seed was ginned. Cotton picked from "rootrot" plants was ginned, the lint combined with that secured from similar plants the two past seasons, and baled.

The work at the station has consisted principally of miscellaneous repair and upkeep jobs.

Prof. Geo. A. Dean of the Office of Forage and Cereal Insect Investigations, Bureau of Entomology, was a station visitor November 20.

Geo. T. Ratliffe.

Scottsbluff

The average maximum temperature for the week ending December 15, was 33, with a maximum of 49 on the 15th; the average minimum was 2, with a minimum of 18 below on the 11th. There was 0.15 inch precipitation from a 2-inch snowfall.

The work of the station consisted of miscellaneous work, caring for stock, work on the poultry house, etc.

During the week the Superintendent made a trip to Denver and purchased a car of steers to be used in feeding experiments this winter and next summer. They were divided into 3 lots and during the winter will be fed as follows:

Lot 1--10 head Corn, corn silage and hay.

Lot 2--12 head Corn silage and hay.

Lot 3--12 head Beet tops and hay.

These lots will be used in pasture tests next summer.

James A. Holden.

Demonstrations on Reclamation Projects.Belle Fourche

The first half of the week ending December 15 was spent in preparing data for the annual report and in making preparations to attend the tenth annual conference of the South Dakota Extension Workers held at State College, Brookings, on December 12, 13, and 14.

One half day at the conference was given to judging various classes of livestock, including Clydesdale mares, Holstein dairy cattle, Hampshire and Shropshire ewes, young beef cattle, and fat and breeding hogs. Among the topics discussed included demonstration work and methods of securing the adoption of practices by farmers, problems in club work, and the practice of cooperative marketing and its adaptability to South Dakota products. Livestock, wheat, potatoes, wool, and alfalfa seed were the products given special consideration by representatives of the various State organizations.

Frank E. Miller.

Newlands

The summarizing of the past year's Herd Testing Association records have required considerable time during the week ending December 15. The work is not yet completed. Up to date the records of thirty-seven herds have been completed. In these thirty-seven herds, 469 cows completed records of eight months or over. The average annual production of these 469 cows was 7,015 pounds of milk. The average production of butterfat was 280 pounds. The records which have been summarized so far for last year's herd testing work indicate that the average production of Newlands project cows had advanced considerably over what it was in 1917. The 1917 Association records show 580 cows tested for the year making an average production of butterfat of 209.3 pounds.

After deducting the value of skim milk at 25¢ per hundred pounds from the cost of feed for each animal for the year 1923, it was found that 469 cows in production for eight months or over produced butterfat for 17.4¢ per pound. In these calculations alfalfa hay was charged at the rate of \$10 a

Newlands (continued)

ton, and each cow was charged with her own weight in alfalfa hay each month of the twelve months period. The heifers were charged with hay at the same rate but only from the beginning of their lactation period.

During the past week assistance was rendered in the placing of three registered bulls, one Holstein and two Guernseys. One article was contributed to the local press with an endeavor to set forth the advantages of converting alfalfa hay into dairy products instead of exporting it. At the present prices of alfalfa hay and butterfat and at present transportation costs, alfalfa hay is bringing into the project twice the amount of money when used at home producing butterfat as when exported to California points to be used for the same purpose. At present prices alfalfa hay is worth \$10 in the stack. A trainload of forty cars of alfalfa hay is worth approximately \$6,000, f.o.b. Fallon. At the present rate of production of our dairy herds, these forty carloads of hay will produce one carload of butter worth \$14,210, f.o.b. Fallon, and in addition approximately 16,000 pounds of skim milk plus the fertilizer, which items go a long way toward offsetting the expense of converting alfalfa hay into dairy products.

On Saturday of the past week the County Farm Bureau meeting was attended and a talk made before the members on the results of dairy herd testing work on the Newlands project for 1923.

L. E. Cline.

Minidoka.

The work during the week ending December 8 was largely miscellaneous in character, catching up with matters that had not been followed up the last month. The increase in dairy population indicates increased interest in general diseases of dairy cattle. There is a widespread fear of contagious abortion but few real cases have been found to date.

A survey of the hog situation indicates that the surplus pure bred animals have been pretty well taken out. A few boars of reasonably good quality are yet for sale.

After holding a conference during the week ending December 15 with Mr. Gibson, representing the Sego Milk interests, it seems that there is a possibility, more or less remote, of obtaining a condensery for this project, if it is possible to ship some milk in by rail. The total production is sufficient to keep a condensery busy, but butter and cheese interests use too much of it to leave enough to make a condensery profitable with the present number of cattle.

We still have an occasional case of hog cholera developing in the neighborhood in which it was found early last fall. Vaccination was not general and from one farm there has been a slow dissemination of the disease. Recent vaccinations in the vicinity will probably control the outbreak. Losses have been very slight.

John T. Montgomery.

North Platte

Most of the week ending December 15 was devoted to dairy development work. Request has been made for the loan of an experiment farm bull among

North Platte (continued)

farmers east of Scottsbluff and a trip was made to that vicinity to look over the prospects. Two more bulls will be ready to put out the first of the year and the plan is to put them where they are needed most.

A young experiment farm bull was exchanged this week for a 3-year-old tried bull out of a 22-pound 2-year-old dam. This bull will be loaned to a group of farmers within the next few days. A couple of the bull clubs were visited this week.

At the request of S. K. Warrick of the First National Bank of Scottsbluff a conference was held with him one evening this week and plans outlined for doing some special dairy demonstration work among the customers of the bank. Quite a number of the customers want assistance in selecting cows and herd sires. Mr. Warrick is willing to finance them if they buy good stuff with the money.

Vaccinating demonstrations were given at three farms. No hogs were sick. The herds were immunized. Only one case of cholera has been reported for several weeks.

D. H. Propps.

Shoshone

A shipment of 33 head of mixed cattle was made up at Powell on Tuesday of the week ending December 15 and consigned to Martin Brothers and Company South Omaha.

The Four County Corn Show held at Worland during the week was a conspicuous success. Farmers from the Shoshone project won two second premiums on variety exhibits. Twenty-five exhibits from project farmers appeared in the show.

Two days were given to a study of the number and kinds of sheep kept on farms and of the methods used.

The annual meeting of the Park County Farm Bureau on Saturday at Cody was well attended and plans for a membership drive and the program for 1924 were worked out.

G. A. Wright.

Uncompahgre

A large part of the week ending December 15 was spent on the poultry show and in making arrangements for three poultry schools to be held with the State Poultry Specialists when he comes for the show. Four communities have requested the services of the specialist in Delta county in addition to the time he will give to judging utility exhibits and putting on demonstrations at the show. The week following the show he is to be in Montrose county for a number of meetings and demonstrations.

One small flock of Rhode Island Red hens was culled. This flock three years ago was made of large, meaty birds, nearly purebred, but very poor from the standpoint of egg production. The owner was induced to cull and secure male birds from a high producing flock. Since then the flock has been culled heavily and persistently and the type is completely changed. It is now one of the best producing flocks in the vicinity.

Uncompahgre (continued)

The regular monthly milk tests were run in cooperation with the instructor in the Smith-Hughes course in the local high school who supervised the tests which were run by one of his classes. He requests that the boys be permitted not only to do the testing but make all calculations as well.

The annual meeting of the Montrose County Farm Bureau was held on Saturday. The meeting was not well attended but was very harmonious and otherwise quite satisfactory.

H. A. Ireland.

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Demonstrations on Reclamation Projects

Flathead

Practically all of the week ending December 15 was devoted to work on the Cow Testing Association and dairy meetings which were conducted with the assistance of Mr. Murdock of Salt Lake and Mr. Tretsvon of Bozeman. These men reported a splendid spirit and enthusiasm among the farmers at these meetings which they found very satisfactory.

On Thursday an organization meeting was held following the preceeding meetings on feeding and explanation of the Testing Association. Constitution and By-Laws were adopted and directors elected. Those present signed the agreement and the rest of the week was put in largely visiting the farmers who had previously expressed a desire to become members and securing their signatures. These all signed when approached.

The general attitude among the farmers is favorable to the association although some at this time do not feel ready to join but will do so later when the opportunity affords.

At a number of these meetings held, Mrs. Miller, wife of the agriculturist gave a talk on foods with milk as the center of interest. An exhibit was placed showing the caloric values of common foodstuffs compared with a pint of milk. Interest in this was very good.

One reactor cow was found this week. This was a generally infected case, showing lesions in nearly all of the glands, including the super-mammary and udder.

Four samples of milk were tested for Mr. Drake of Valley View.

The week ending December 22 was devoted principally to Testing Association and tuberculin work. Directors of the Association held a meeting on Monday in this office and elected officers and decided on some features of the policy to be followed. The president is Mr. Griswold, a man who has been a cow tester, the second in the state, following Mr. Murdock in the Bitter Root Valley Association. He has also been assistant county agent and therefore has a fine knowledge and view of the work, and will make a splendid head for the organization. The Secretary-Treasurer is an ex-school principal of Ronan who has been farming for a number of years now.

Up to date 33 farmers have signed the agreement but as a number of these are doubling up on the day's work, there are about four more days to

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IN THE YEAR 1649

Flathead (continued)

fill up to get the 26 days filled. This will make a big job for the tester but I think he will find the directors willing to do their share. They agreed to pay up to \$90 a month and provided for a bonus of at least \$100 at the end of the year. This may be considerably increased if the work of the tester warrants. Have gotten in touch with two prospective testers and hope to get one here to start the work by the middle of January.

Dr. Murdock, Inspector in charge of Federal Veterinarians in the state was here the last three days of the week and considerable time was put in with him. On Saturday we paid a visit to the Indian Agent and secured his cooperation in testing the cattle of the Indians. He thought he would be able to furnish transportation and an interpreter for the Veterinarian.

Approximately 4,000 cattle have been tested to date at a cost of \$125 to the county for transportation. Three reactors were found this week, making a total of nine to date.

Dr. Murdock seemed well pleased with the work done so far and with the cooperation of this office. The educational and publicity work of the office on tuberculin testing met with his distinct approval.

Dr. Wilnot reported the first of the week, making three veterinarians in the county now. With the cooperation of the Indian office practically assured, Dr. Murdock plans to place a fourth man here soon.

A meeting of the Guernsey Cattle Club of Valley View was attended during the week. The matter of securing dairy heifer calves was discussed at some length.

Mr. Fowler of the Dairy Loan was in for a conference during the week. He hopes to place a carload of cattle in the Valley at an early date.

L. B. Miller.

North Platte

Part of the week ending December 22 was devoted to bull club work. Two communities were investigated as prospects for placing bulls but no agreements were made.

In cooperation with S. K. Warrick a number of farmers were visited and interviewed in regard to milking more cows. Assistance was given in selecting cows.

The best purebred cow at the experiment farm freshened during the week. She had milk fever the day after freshening and some time was spent in treating and caring for her. She will be given an official 7-day test beginning some time next week.

A culling demonstration was given at the farm of Norman Lerley in Lake Alice district. Sick hens were examined at W. A. Hale's and tuberculosis lesions were found in great numbers. Information in regard to cleaning up the flock was given.

Sick hogs were reported north of Henry. Examination showed the pigs to be suffering from round worms.

D. H. Propps.

Shoshone

During the week ending December 22 the returns from a collective shipment of mixed cattle consigned to Martin Bros. & Company, December 11 was

Shoshone (continued)

received and indicate that the market was at least 50¢ per cwt. lower than at the time of the next previous shipment. The best steers in the latter shipment brought only 6½¢ per pound at Omaha.

On December 18, for the first time, milk samples from the herds using government owned bulls were collected and tested and also samples from several herds using other sires. Two days were spent ascertaining who has hogs weighing from 70-100 pounds and how many are willing to sell at 5¢ per pound f.o.b., Powell. A Nebraska feeder wants 2 carloads of that description. Investigation has brought out the fact that nearly all the hogs on the farms at the present time are either heavier or lighter. Not even one carload has been located.

The price of butterfat continues to be 41¢ per pound, but hay has dropped to \$10 per ton, f.o.b., alfalfa mill and loading points.

G. A. Wright.

Newlands

The greater part of the week ending December 22 has been taken up with work in connection with preparing the annual report. One of the principal items of interest during the week has been the marketing of turkeys. Early in the week the market had dropped to 25¢ per pound for dressed turkeys in San Francisco. By Saturday the price had advanced from 32¢ to 36¢ with predictions that it would go even higher before Christmas day. A great many of our growers sold on low markets both for Thanksgiving trade and Christmas trade, although good markets prevailed at times during each period.

The dairy census survey for 1923 disclosed these very interesting facts. The dairy cow population increased from 3,457 in 1922 to 4,221 in 1923, or an increase of 19.4%. The same period showed an increase in dairy heifers from 1,524 to 2,486, an increase of 62%. The number of registered bulls at the head of herds increased during the same period from 97 to 134, an increase of 38%.

L. E. Cline.

The first thing I noticed when I stepped out of the car was the cold. It was a sharp contrast to the warm blanket I had been sitting under. I looked up at the sky, which was a pale, hazy blue. The air was still, and the only sound I could hear was the distant hum of traffic. I took a deep breath, feeling the cold air fill my lungs. It was a strange sensation, but it felt like a fresh start. I walked towards the building, my footsteps echoing on the pavement. The building was a large, multi-story structure with many windows. Some of the windows were lit up, while others were dark. I walked up the stairs, feeling a sense of anticipation. I knew that this was my chance to shine, to prove to everyone that I was capable. I took a deep breath and stepped forward, ready to face whatever came my way.

Chapter 2

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Chapter 3

WEEKLY REPORTS

Of the Offices of

WESTERN IRRIGATION AGRICULTURE

And

DEMONSTRATIONS ON RECLAMATION PROJECTS

Vol. XXIII

December 29, 1923.

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Western Irrigation Agriculture

Newlands

The meteorological data recorded at this station for the period from December 3 to December 31 is as follows: Mean maximum 44.8; maximum 61 on the 25th; mean minimum 14.4; minimum -2 on the 11th. The rainfall was .06 of an inch on the 8th; trace on the 14th; .08 on the 19th; .06 on the 26th; .15 on the 29th; and .21 on the 30th; making a total of .56 inch.

The usual winter work has been continued throughout this period. The days during which the ground had thawed were devoted to leveling the fall-plowed checks on the H series. Manure is being hauled from the U. S. Reclamation Service corrals for application to the garden plats on B and the pasture.

Some further work has been done in repairing irrigation boxes, farm fences, and the overhauling of machinery.

At the recent annual Farm Bureau meeting Mr. Cline presented data showing the results of the herd testing work for the past year. He also gave an account of the advance of the dairy industry on this project. Mr. Knight addressed the assembled farmers on the subject of "Hog Raising." Data was presented giving the results of the various hog feeding experiments conducted at this station.

E. W. Knight.

Demonstrations on Reclamation Projects

Flathead

Two press articles and two news letters for press were prepared during the week ending December 29, particularly on the Cow Testing Association. Two more members were secured for the association. Snow and a blizzard prevented other trips to distant farmers.

Dr. Wilnot was on duty during the week and he was taken to Valley View to work that territory. A farmer there consented to accompany him on the tuberculin testing trips.

Butterfat is bringing 47 and 49 cents. Eggs are 50¢ a dozen. Snow storms prevented travel except on the main highways. As much vacation was taken this week as pressing matters permitted.

L. E. Miller.

North Platte

During the week ending December 29 an official test was commenced on a Holstein cow at the experiment farm. She is the dam of two of the bulls already

North Platte (continued)

loaned to bull clubs and therefore it is highly desirable to get as high an official record on her as possible. She made 26 pounds of butter last year but is capable of doing much better than that.

A vaccinating demonstration was given at the Craft farms north of Payard. No hogs were sick but the herd was immunized. No cholera has been reported for several weeks. Dr. Edwards of Gering is doing most of the vaccinating now, getting the serum and virus through the experiment farm.

A culling demonstration was given at Wm. Hale's near Scottsbluff. The flock was badly infected with tuberculosis. Several of the birds were slaughtered and the lesions pointed out. The whole flock may have to be disposed of.

D. H. Propps.

Stoshone

The week ending December 29 was taken up chiefly with matters pertaining to dairy problems, a proposed shipment of stock hogs and an annual report. A Nebraska feeder was informed after a survey of the situation, that he could secure two carloads of hogs ranging from 70 to 140 pounds in weight for 5¢ per pound. A wire from him on Saturday brought the information that he will be in Powell Monday to receive them. A study of butterfat production for 1923 was made and 5 farmers assisted with problems involving the proper feeding of dairy cows.

Butterfat remained 41¢ per pound throughout the week. Receipts of the new Powell Creamery have increased each month of its existence. Butter sales have also increased, but have not kept pace with butterfat.

A blizzard struck the project early on December 29, a strong wind, drifting snow all day Saturday and also Saturday night.

G. W. Wright.

Miscellaneous

The attention of the field men both in Western Irrigation Agriculture and in Demonstrations on Reclamation Projects is invited to the following correspondence:

Miscellaneous (continued)

December 29, 1923.

Mr. C. S. Scofield,
Agriculturist in Charge,
Bureau of Plant Industry.

Dear Mr. Scofield:

The following self-explanatory letter, under date of December 18,
has been received from Mr. J. H. McGuffey, Mciese, Montana:

Have just read the report of the experiment farm of
Huntley Reclamation Project for 1921. That information is
now two years old and so few of our farmers get these bulletins.
Can't you arrange to have the results of the principal experi-
ments published in the Reclamation Record. These experimental
farms are maintained at considerable expense and their work is
of more than local interest. The experiments in feeding hogs
at Huntley are of value to all of us who raise hogs.

If you consider Mr. McGuffey's suggestion feasible, we will be
very glad to cooperate with you by publishing advance reports of experi-
ments in the Reclamation Record.

With the season's greetings, I am,

Very truly yours,

D. W. Davis

Commissioner,
Bureau of Reclamation.

Miscellaneous (continued)

January 8, 1924.

Mr. David W. Davis,
Bureau of Reclamation,
Department of the Interior.

Dear Mr. Davis:

I have at hand your letter of December 29 quoting a letter from Mr. J. H. McGuffey of Moiese, Montana. Mr. McGuffey suggests the desirability of publishing in the Reclamation Record the results of the experimental work conducted at certain field stations located on reclamation projects.

Before replying to this letter I have taken the time to give the matter careful consideration. We would be very glad to utilize the columns of the Reclamation Record as a means of bringing before the water users on the projects the results of the experimental work accomplished at these stations to the extent that space in the Record permits. Our people have in the past published numerous articles in the Reclamation Record and my feeling is that these have served a useful purpose. I should be glad, of course, to continue to submit such articles from time to time from the field men who have first hand information concerning the problems of crop production and livestock work which most acutely concern the water users and those who are also engaged in attempting to solve these problems.

It may not be practicable to attempt to publish in the Reclamation Record, results of experimental work in advance of their publication by this Department, but much of the work that has already been summarized and published bears directly on problems which continue to recur to the water users and the results of our experience may be helpful to a better understanding of these problems.

I am bringing this correspondence to the attention of our field men both in the investigational and demonstration work and I am asking them to have in mind the possibility of preparing for the Reclamation Record brief articles bearing on some problem of crop production or livestock work which might well be made the subject of such an article.

It might be helpful in bringing forward this material, if we might have from you from time to time, suggestions as to subjects concerning which we might contribute the results of our investigational work. I would appreciate it also if you would in case of such suggestions, indicate the space you are prepared to devote to the article, including the mention of illustrations, if those are desired.

With best regards, I am

Very truly yours,

C. S. Scofield,

Agriculturist in Charge.

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